

Florida

Cooperative Black Crappie
Science of Guiding

Fishing • Hunting
• Conservation •
Outdoor Recreation

WILDLIFE

FEBRUARY 1969

The Florida Magazine for all Sportsmen

25 CENTS



Wallace
Hughes
1968

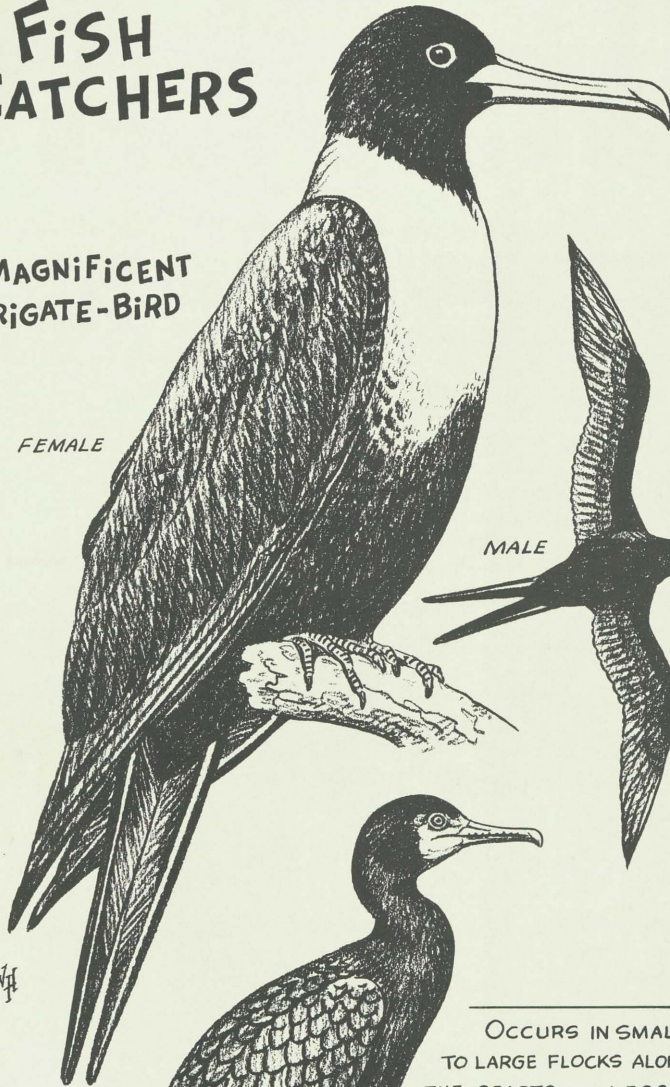
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Florida Wildlife Scrapbook

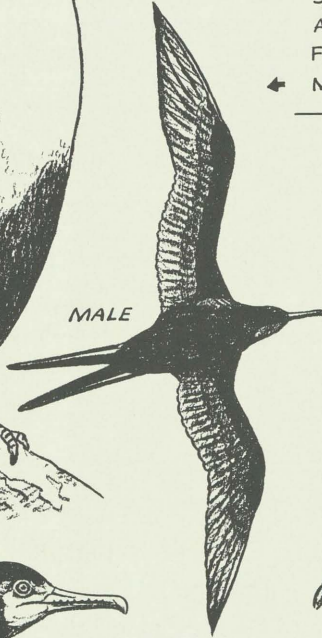
FISH CATCHERS

MAGNIFICENT FRIGATE-BIRD

FEMALE

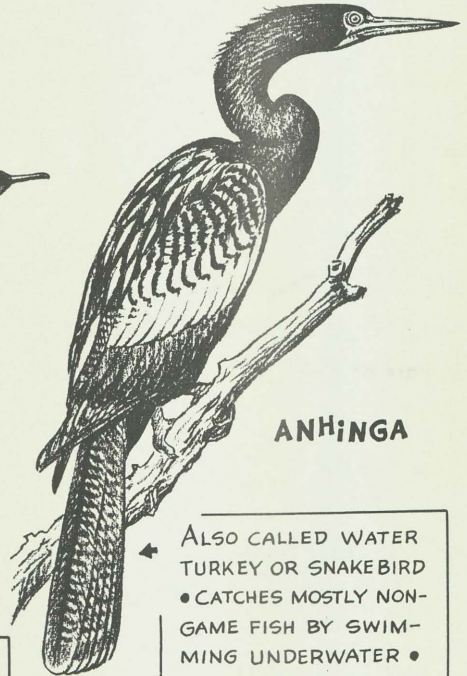


MALE



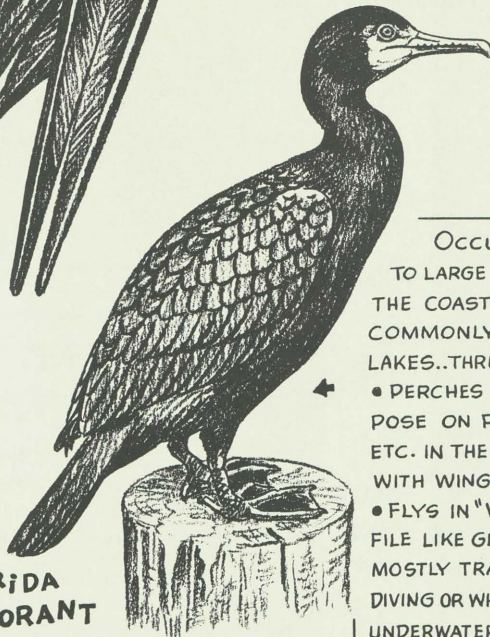
ALSO KNOWN AS MAN-O-WAR-BIRD
• IN PROPORTION TO ITS 3½ POUND BODY WEIGHT...ITS 7½ FOOT WING-SPREAD IS GREATER THAN ANY OTHER BIRD IN THE WORLD • A SEA BIRD... RARELY FOUND INLAND..IT CAN'T SWIM
• MASTER OF FLIGHT IT PICKS UP SURFACE-FEEDING FISH WITH EASE • ALSO ROBS PELICANS AND GULLS • FOUND ALONG THE FLORIDA COASTS
← MOST COMMON IN SOUTH FLORIDA

ANHINGA



← ALSO CALLED WATER TURKEY OR SNAKEBIRD
• CATCHES MOSTLY NON-GAME FISH BY SWIMMING UNDERWATER • OFTEN SEEN SWIMMING WITH JUST HEAD AND NECK ABOVE WATER • COMMONLY OBSERVED HOLDING ITS WINGS OUTSTRETCHED WHILE PERCHED IN A LOW TREE OR BUSH • FOUND THRUOUT FLORIDA IN FRESH WATER LAKES, SPRINGS, MARSHES AND SWAMPS • LENGTH 34"
• WINGSPREAD 4 FEET

FLORIDA CORMORANT



← OCCURS IN SMALL TO LARGE FLOCKS ALONG THE COASTS LESS COMMONLY ON INLAND LAKES..THRUOUT THE STATE
• PERCHES IN AN UPRIGHT POSE ON POSTS, BUOYS, ETC. IN THE WATER..OFTEN WITH WINGS SPREAD •
• FLYS IN "V's" OR SINGLE FILE LIKE GEESE • CATCHES MOSTLY TRASH FISH BY DIVING OR WHILE SWIMMING UNDERWATER • LENGTH 35"

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The Cover

The Redear Sunfish, commonly known as shellcracker, is one of the big spring and summer angling attractions. It can be found in all Florida fresh waters except the extremely overenriched and grossly polluted types. See page 4.

From A Painting By Wallace Hughes

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FLORIDA'S SHELLCRACKER life history study, a federal aid project being conducted by fishery biologist Robert L. Wilbur, Eustis, keeps turning up interesting information on this popular game fish, officially called Redear sunfish, *Lepomis microlophus*.

Wilbur's prime study areas are lakes Griffin (Lake County) and Weir (Marion). He also conducted studies in state fish hatchery ponds at both the Richloam (Sumter) and Holt (Okaloosa) facilities. His 1967-68 Annual Progress Report gives special emphasis to shellcracker food habits, reproduction, size, and growth rates. The authoritative report also considers movement, behavior, and some effects of overenrichment of water on this species.

According to the report, shellcrackers in Lake Griffin were found to be well distributed most of the year in almost every part of the lake, whereas in Weir they were generally found away from the shore, or littoral zone, in open water—but never below a depth of 20 feet. Early spring spawning brought populations in both lakes closest to the shore.

Midge larvae were the most important food item in the diet of Griffin shellcrackers but the mayfly nymph was the preferred food in Weir. Snails were an important item for Griffin fish but were infrequently eaten by the Weir population.

The study also verified that Florida shellcrackers grow to about 5 inches in length in one year and to about 7 inches by the end of 2 years. They reach maximum lengths of 13 inches, or slightly over, and live probably 5 years. The average weight is about half a pound.

Based on examination of the reproductive organs, Wilbur suspects that peak shellcracker spawning in Lake Griffin occurred last year during March and April. In Lake Weir spawning peaked in June and July. Spawning in both lakes was sporadic from February through July.

Florida shellcrackers appear to be capable of spawning at about 1 year old, but under natural conditions reproduce for the first time at about 2 years, the attainment of sexual maturity apparently being tied more closely to the fish's size than to its age. (Various studies indicate first spawning occurred when shellcrackers reached 5½-to-6 inches long whether they were 8 months old, as in south Florida, or 24 months old, as in north Florida, Tennessee and Indiana investigations.)

These favorite panfish are highly adaptable to various habitats. They live in lakes, ponds, rivers, and streams and are unusually well adapted to life in the grassy marshes of the Florida Everglades, according to previous Commission studies and to Wilbur's own observations.

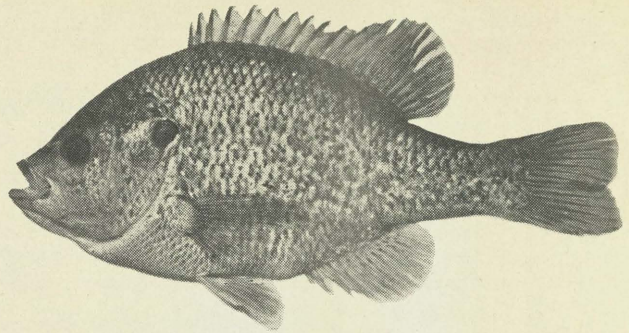


Photo By Wallace Hughes

The Redear Sunfish, or shellcracker, is a top panfish in every respect. Florida studies indicate good adaptability to various environmental conditions—rivers, streams, lakes and marshes.

Likewise, they are adaptable to all kinds of spawning habitats, preferring hard, sandy or rocky bottoms on which to fan their "communities" of beds, but accepting, to some degree, loose bottoms covered with decaying vegetation. They successfully spawn in water from a few inches to several feet in depth, sometimes bedding in and under aquatic vegetation, such as maidencane, pickerel weed and water lilies, and sometimes in open water.

Female shellcrackers almost always outnumbered males in Wilbur's investigations. Ovaries from Griffin and Weir shellcrackers contained from 10,500 to 44,700 eggs, with the Griffin females averaging the greater numbers. (The higher fisherman catch per hour in Lake Griffin indicated to Wilbur that Griffin has a much denser shellcracker population than does Lake Weir, but he stated that whether this is due to the higher production noted for Griffin's female fish or to other factors is unknown.)

Wilbur's conclusion, on the possible effects of enrichment on shellcracker production, cautions against this form of water pollution:

"The fact that Griffin's shellcracker population is denser and has a higher mean condition than Weir's should not be misconstrued as an indication that unlimited 'enrichment' is beneficial to shellcracker populations. (Griffin is an overenriched, *eutrophic* lake; Weir is not.—Ed.) There is undoubtedly a set or optimal water quality conditions which produce optimal shellcracker populations and a range of water quality conditions under which shellcracker populations may exist in varying states of productivity. Consequently, the greater the water quality conditions deviate from the optimal, to the right or left, the greater will be the detrimental effect on the shellcracker population. This is evident in the L2-P area of Griffin (polluted station #1—the sample area receiving effluents from Leesburg sewage treatment plant and from citrus processing plant), which was more eutrophic than other areas of the lake. The population consisted primarily of gar and chubsuckers, and no shellcrackers were ever collected there." ●

Down Deep

FISHING

the deep sea fishing boat crews are often "battled" by the inexperienced fisherman who cannot catch fish like a few others do with ease

By CHARLES WATERMAN



DON'T GET MAD at me. I am treading softly on this subject.

Florida's salt water party boats are a pretty big business. The party boat is generally a bottom fishing outfit and professionals call it a "head" boat because the fishermen are taken on board at so much a head—sometimes for half a day and sometimes for all day.

Head boats come in all sizes, but many can accommodate 40 or 50 customers; most of them can provide tackle and nearly all of them provide cut bait for bottom fishing. They are the Number One fishing attraction for a lot of people, many of whom have no other way of getting into salt water. They bring in a variety of fish but their main targets are usually snapper and grouper.

That's the background; now the pitch:

I have heard a number of complaints from people who say they've spent considerable scratch on head boats, haven't caught enough fish to fill a skillet and have a low regard for the party boat crews and the whole party boat industry. When I have pressed the point, most of them have admitted that on nearly every trip other anglers seemed to catch a lot of fish.

Some of these folks go so far as to say that party boat crews help only a chosen few, leaving the rest to go their confused and fishless way alone.

I am going to defend the party boat crews—to a degree. I would be the first to admit that a properly dimensioned dolly in a snug sunsuit is likely to have a little special angling instruction; more likely, say, than a retired businessman in a grumpy mood.

I also point out that there are "regulars" who fish those boats daily, become very well acquainted with the crews and have regular fishing spots on their favorite boats. These spots on the rail may actually have some minor advantage because of their relation to where the anchor drops. On the other hand, their only advantage may be convenience or the personal preference of the user. A newcomer to the head boat may be irritated to see a fellow in a certain spot catching a lot of fish while other anglers fail.

Usually the answer is that the regular knows what he's doing and may even have brought his own bait aboard.

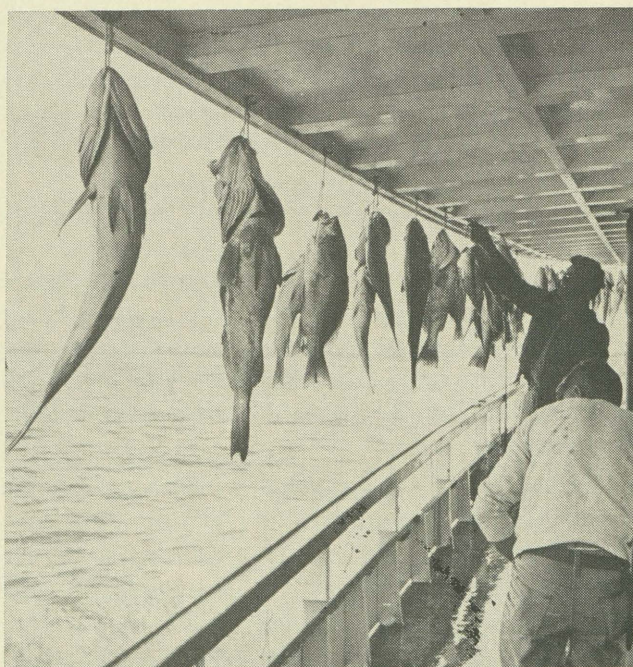
Bottom fishing may not be the most artistic, sportiest or most glamorous angling but it takes skill to be consistently successful at it. Some head boat fishermen have made a modest living by selling their catch and to do that they have to know their business.

The attitude of the crewman goes something like this: He would help the veteran anglers if he could but they don't need help and may even know what's going on down there better than he does.

He knows it is his duty to give elementary instruction to first-timers; he hopes they will catch fish and come back for other trips.

He has so many clients he knows he cannot possibly coach each one extensively so he confines his instruction to rigging the bait, explaining the tackle and giving advice once a fish is hooked. After the bait is rigged and the fishing procedure explained he generally figures the fisherman is on his own until a fish is hooked whereupon most head boat mates will go through all kinds of strenuous contortions in order to gaff the catch.

(Continued on next page)



Hanging the catch on deck of the August Moon, fishing out of Fort Pierce, Fla. On the "Moon," as on many of the party boats, a small percentage of the fishermen manage to haul on board a large per cent of the fish.

(Continued from preceding page)

Now head boat operation is hard work and the days are long. Perhaps the crewman cannot be expected to go beyond the call of duty with any individual angler. If he sees the same face several times along the rail he immediately assumes the repeater is a skilled or semi-skilled fisherman and he doesn't offer advice.

If you have made several trips with little success and understand the fundamentals, you need to cultivate the friendship of really skilled bottom fishermen—the folks who keep catching fish trip after trip. If you can't get help from them, at least you can observe them as there are few hiding places at the rail. If you can't learn by watching for a few trips, something is wrong with *you*.

I have received letters in which a fisherman stated that he thought the head boat operators didn't *want* him to catch fish. I think that is extremely unlikely as landed fish bring repeat business and repeat business is what makes the head boat engines go.

I have also been queried about rigs to be used for bottom fishing. There are many of them used in different areas and you're generally ahead to get the rig from a crewman.

I'm no bottom fishing expert, myself, but here's a setup used by an experienced head boat fisherman who has caught plenty of snapper and grouper.

If you use your own rod, reel and line, keep them husky: at least as tough as what's issued to those who don't have their own equipment. The bottom boat is no place to display ultra light tackle skill.

Tie your line to a black 1/0 swivel. "Below" the swivel run six to 12 inches of 100-pound test monofilament and put an eight to 10-ounce, free-sliding egg sinker on that section. Then tie on another black 1/0 swivel and below it run one to two feet of 100-pound monofilament, tying the hook directly to that. The size of the hook will depend upon the bait and the kind of fish expected. Once your sinker hits bottom you crank it back up a little, probably several reel turns, depending on the species sought and the kind of bottom.

That outfit can be altered to suit the individual situation but it's all right as a starter.

On the subject of bait there are some complaints that the most successful head boat anglers bring their own. That's sometimes true and it *may* get them a better catch than they'd have if they used bait provided by the boat. On some occasions the furnished bait is ideal.

On one boat I heard some grumbling that the "same people catch all the fish because they have special bait."

On that occasion it was true but the party boat hadn't furnished it. Those successful fishermen had been up since before dawn catching their own spe-



The "Floater Bubble," made of plastic, has a splash guard for the user so that he can keep dry above the waist. Made by Pueblo Tent & Awning Company, Pueblo, Colorado, it has loops to hold guns or fishing rods.

cial bait, an exhausting procedure open to anyone who wanted to pursue it.

There is skill involved and it takes study and practice to score consistently on a party boat.

Although charter boat trolling (the charter boat takes only a few fishermen at a time, seldom more than six, and is much more expensive per fisherman) is more glamorous and generally considered sportier fishing, the fact is that the guy who pays for the charter actually needs less skill than the head boat angler. The skipper of the charter boat does most of the fishing until you get the strike.

I AM PRETTY SOLD on the innertube type of fishing float—the kind you sit in with some sort of canvas or plastic harness.

I have no intentions of going over Niagara Falls in one, but since first writing of them in these columns I have had more extensive experience and collected some opinions which will at least be good for argument if not informative.

I think the most rugged type made employs a true truck or auto innertube and the one I have is the Fish-N-Float built by the Tucker Duck and Rubber Company in Fort Smith, Arkansas. This one is made of heavy canvas and has a husky zipper. You put the innertube inside, zip it up and inflate it moderately until the canvas is tight. There is a simple canvas seat suspended inside with openings for your legs. Frills include a zipper pouch that sits directly in front of the wader (or pilot, or sailor or swimmer or somebody).

There are suspenders to hold the whole thing up when you walk but I wouldn't count on much of a hiking trip while inside. If you have far to go it's better to carry the float on your shoulder, or handier yet, on a packframe.

When you're in water of wading depth you'll find it most convenient to simply sit down with your feet on the bottom. When the water gets too deep for bottom touching you may have a spooky moment on your first trip as you find your feet pawing for something that isn't there.

You can travel wet in warm weather but most of my experience has been with chest waders and with them you can keep completely dry unless you are careless in dipping your arms over the side. Believe me, these gadgets are quite comfortable for fishing operations on quiet waters, being a lot steadier than some boats I've ventured forth in.

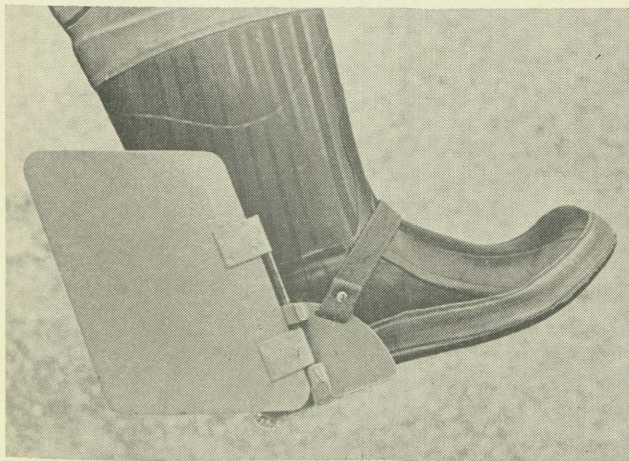
Now there are plastic floating rigs that blow up to considerably greater size than my truck tube unit and would therefore keep you higher in the water and riding even steadier. The objections would be that they are somewhat easier to puncture and a bit bulkier to transport when inflated.

For propulsion you have an assortment of ideas. If you use nothing but your feet and the water is extremely calm you can kick yourself backward at slow speed, and still be all set for walking in shallow water or on dry ground. If you are not wearing boots or shoes you can use standard swim fins and move backward at a faster pace.

If you want to go forward there is the "Paddle Pusher," available at some sporting goods stores and made by the Fishmaster Mfg. Co., in Oklahoma City. These are light metal paddles that can be strapped to your feet. When you push backward the paddle sticks out and shoves on the water. When you move your toes forward they fold back like a pair of horseman's spurs. They are very efficient except that you can't fight a strong current, but as I said, the floating rig isn't intended for running rapids or weathering typhoons. You may need to bend Paddle Pushers to make them fit boot heels.

Now a pushpole is excellent and so are ping pong

The "Paddle Pusher" attached to wader's foot. In most cases the heel section must be bent in order to get a boot inside.



paddles if you have your hands free. I have used a pole while retrieving ducks but don't know what I'd do with it when fishing.

So how can you get into trouble? It isn't easy but it's possible. One expert tells me that anyone using swim fins should back into the water as he could get a nasty fall if he trips on the bank, the big web-feet being hard to get under him again.

In very deep water with heavy moss growths it is possible to get your feet pretty well tangled up but a little care will get you out. In any event you don't want to get upside down with all of that harness on your lower half. With any reasonable care it is unlikely that you could tip over but getting feet out through the leg holes in a hurry could be difficult if you wear either the paddle pushers or the swim fins.

What about wind and wave? Well, one fellow I know drifts across a deep lake, even when it's kicking up pretty high. He says the float rises and falls in a highly exhilarating manner; but he wears a life jacket. Of course you have a true life preserver as long as you can stay right side up.

For the uses it is intended this type of gear is worth looking into. I have used homemade models consisting simply of a truck tube and a "saddle".

These things get you around with a minimum of disturbance.

THERE HAVE BEEN numberless gadgets built to aid fishermen in night operations. One of the niftier numbers is the "Tie Focal" made by Wright & McGill and found in some sporting goods stores. The thing fastens to your shirt or jacket with a locking safety pin, closes up to about the size of a railroad watch when not in use, and can be opened into a combination light and magnifier for those of us who have trouble tying knots in anything but the best of illumination. It leaves both hands free for fumbling with line or swatting mosquitoes. Costs about two bucks; takes a small flashlight battery: very light.

I'm vague about the effects of lights on fish at night. Some nocturnal bass fishermen go so far as to turn off the car headlamps before they reach a lakeshore. Under other circumstances lights can build a special food chain for fish, attracting insects which attract minnows which attract the fish you're after. The bright lights have worked well on crappie as well as salt water species, especially trout.

I'm a little short on scientific proof but I lean to the belief that sudden appearances of bright flashlights may scare bass—except where they're used to lots of lighted boats and shoreline illumination. I'd be careful of the lantern on a wilderness lake but wouldn't worry about it on a busy bridge or around a brightly-lighted dock. ●



The skunks, though they are better known for something else, are beautiful animals. The spotted variety, above, is predominant in south Florida. The more common striped skunk can be sighted over all of America.

By GENE SMITH

Florida Skunks

although much maligned and shunned, these critters are amusing nonetheless

LONG BEFORE MAN had the thought, a smallish black and white, bushy-tailed, short-legged mammal invented chemical warfare. He is the skunk, by nature a peaceable creature who wouldn't dream of using his odoriferous, not-so-secret weapon casually. He employs it full force only in self-defense—and for this we can all be grateful.

Rarely will one see a skunk in a hurry. Their short legs carry them at waddling gait which merely progresses to a faster waddle, or, at best, a cumbersome gallop, if they are pressed.

But skunks don't need speed. Nature has endowed them with another defense system: extremely foul-smelling glandular secretions that can be directed from two small anal nozzles toward an enemy. The nauseous fluid—containing *mercaptans*, sulphurous chemical compounds—irritates the eyes and inflames the nostrils of would-be attackers. And it certainly dispels their appetites for a while!

Up to about ten feet the skunk has good accuracy with his misty spray. One "lesson" is usually enough for a dog, bobcat or fox of even average animal intelligence. Thereafter, skunks encountered along the trail are likely to get all the room they want. (It is said, however, that the great horned owl indiscriminately feeds on skunks, seeming not to mind the musky odor.)

There are two kinds of skunks in Florida: the common, or striped, skunk and the smaller spotted

skunk, the one we sometimes call a civet cat. Both are simply referred to as polecats in many locales. The striped skunk is the more familiar of the two. It is found all over the country. It has long, black fur and usually has a prominent white "V" from its head and nape back over its haunches. Its face may or may not have a white blaze. Likewise, the tail may or may not be partly white.

He is a chunkily-built animal—heavier than the average housecat and appearing even larger than he really is because of his ample fur. His feet, especially the front pair, are well equipped for digging for he is a burrowing animal and one that claws much of his food out of the earth.

In the North the skunk takes extended, but fairly normal, winter slumbers. During this time of semi-hibernation they awake periodically to move about in search of food, then resume their rest, awaiting the spring. Florida skunks are active year-round.

All skunks burrow—in gopher holes, under blown over trees, in excavated ditch banks and similar sheltered places, and under junked autos and other man-made objects and structures. Their dens are usually lined with dried grasses and are quite snug.

The striped skunk has from 4 to 6 young, born late in the winter or in early spring. They remain in the den about six weeks. Then they begin to trail in single file behind their mother as she prowls

the forests, fields and roadways on feeding forays. A skunk family out for an evening stroll is one of the most captivating sights in nature.

Skunks eat rodents, reptiles, birds, eggs, fruits, berries, insects, worms and grubs. A garbage dump attracts them regularly. There they find not only garbage to plunder but rats and mice in abundance.

The little spotted skunk which inhabits peninsular Florida is only slightly different from his better known cousin. It is not as heavy and its white lines are broken into irregular white spots. It has fewer young per litter and its range is restricted. But it smells just as "loud," eats most of the same foods and has most of the same habits.

There is one interesting difference in its behavior when on the defensive.

The striped skunk first raises its tail high over its back, facing its adversary coolly. Then it pats, or stamps, its front feet menacingly on the ground. If the foe is not discouraged by this display, or, like a puppy, is ignorant of the impending crisis and fails to withdraw, the skunk turns its back and lets fly! Phew!

But the spotted skunk throws in a variation. He stamps a little, too, but soon goes up on his front paws in a perfect handstand—the better to display his spotted back and full tail to the intruder. This is his warning. If the foe advances he draws the tail down out of the line of fire and directs a shot of musk straight toward his assailant while still handstanding. He only stays up for 6 or 7 seconds at a time but is quick to rise and fire again if necessary. (It rarely is.)

It should be remembered, however, that skunks don't normally spray without provocation. Even live-trapped skunks usually fail to scent, except in minute quantities.

It is a fact that neither skunk species can release its musk if its tail is held down. So, in theory, holding an "armed" skunk would be no trouble if the sharp teeth could be avoided. But the catching and the turning loose, on the other hand, could present quite a problem.

Surgically de-scented skunks make passable pets, even adorable pets—for a time. But like most wild animal pets, they get dirty, they will definitely bite, they lose their appeal and eventually are likely to be passed along to someone else. Frankly, all wild animals, skunks included, are far better off in their natural state.

The only really bad part about skunks is their tendency to move in with people. When a skunk declares war on a neighborhood dog under one's house, or when a family of them dens there long enough to begin to "perfume" the premises merely by their presence, it's time to take some defensive action of one's own.

If the house is underpinned, wait until late at night when you're reasonably sure the skunk is out making his rounds and plug all possible entrances. He may then go bother someone else. On the other hand, if you're dealing with a mother skunk and she has a litter still under there she'll find the time and the place to dig another hole.

Commercial fumigants, applied in the daytime, will normally chase the adults out. And if applied at frequent intervals for a season they will usually discourage renewed denning.

We once were called upon to evict a family of spotted skunks from beneath the concrete base of an outdoor barbecue pit. Formaldehyde fumes, blown into the den opening through a garden hose, did the trick—but not before you-know-what happened!

Another skunk of our acquaintance almost closed down a thriving nightclub under which it had taken up residence—in the vicinity of the musicians' living quarters (no reflection on their music, we're sure). The same chemical (formaldehyde) was applied in this case but no exiting skunk was ever observed. The band members, though, were forced to change their quarters!

Then there was a nice clubwoman in that same part of town under whose house skunks denned. Not only did they begin to smell. They rattled the plumbing and kept her awake nights. She tried everything—trapping, shooting, wire fencing, boarding up holes—everything but poison, which, incidentally, is *not* a safe solution to the problem of friendly skunks. But they loved her just the same, and probably still bother her. We recommended fumigation and a short vacation.

What to do if you should get sprayed by a skunk?

First, stay out of the house—and car—if at all possible. Get some help. Send for household ammonia, several large cans of tomato juice and carbolic soap. You'll need some gasoline, too, if you really got it good.

Rig a screen, if necessary, and disrobe out in the fresh air. Next, wash your clothes in a strong ammonia solution, leaving them to soak while you take care of yourself. (Later, hang them out in the breeze for several days. Repeat the treatment if the fragrance lingers.)

Now wash yourself from head to toe in tomato juice. For a mild "skunking" this will usually do the job. If, however, the fluid actually got on your skin, follow the tomato juice bath with gasoline—at least in the area most affected.

You can go inside after that—for a prolonged shower, using warm water and carbolic soap.

Finally, apply lots of *eau de Cologne* and hope you're "nice" again. ●



By ELGIN WHITE

Boating Travels

as sections of the cross state barge canal are completed, boaters can once again go along the beautiful central fresh water cruising connections

THE RECENT PUBLIC hearings held by the Florida Boating Council throughout the state revealed that boaters and boating interests are becoming pretty concerned about the distribution of tax monies gathered under the Florida Motor Boating Law.

The hearings brought out on more than one occasion the fact that boaters want to see the tax monies channeled to provide the Boating Council, under the Florida Board of Conservation, with necessary funds to construct more public boat ramps, especially in salt water areas.

They were additionally concerned that some of these monies be provided to the Board to mark recreational channels in waterways not marked by the Coast Guard.

The Florida Boating Council also is planning to suggest legislation to the upcoming session of the Florida Legislature requiring divers to display a prominent flag buoy when diving as a necessary safety procedure.

Chairman Randolph Hodges of the Boating Council, and Vice Chairman O. E. Frye, Jr., go on record at just about every meeting of the Council in support of these safety regulations.

These two men will have a great deal of influence in seeking this new safety regulation, and it is for the good of all Florida boating that they are in the position to do something about it.

Some good news is coming out of the Council meetings too, concerning transfer of title certificates and registration of boats. At present these certificates and registration papers are transferred separately, and the Council is going to recommend to the Legislature that when certificates of title are transferred, the registration certificates be transferred automatically. Another move at eliminating unnecessary red tape.

It would seem to me that really enthusiastic members of the boating public, and in Florida we have hundreds of thousands, would turn out better for these public meetings when they are brought right to their front door. It is a matter of record, however, that the turnout is usually small.

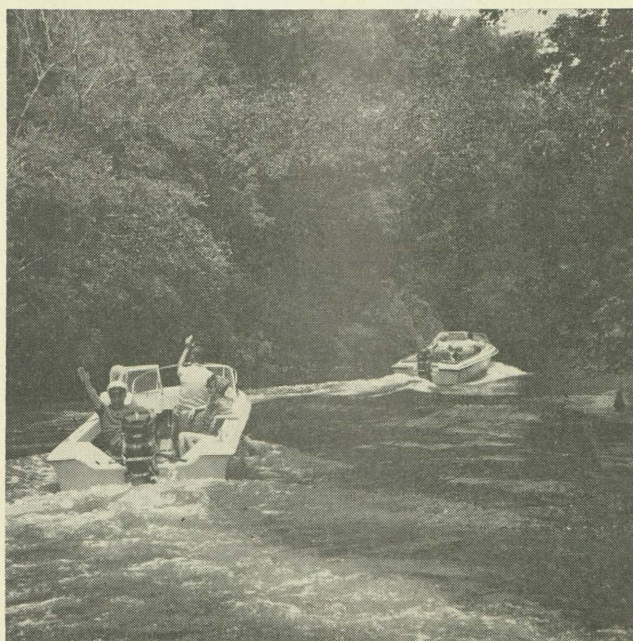
This follows a pattern for most public hearings,

however, unless there is a real thermal tuber to be tossed around. A "thermal tuber," by the way, is an expression used by the Outdoor Writers Association of America to describe a hot potato.

There are some important items affecting every boatman in the state on agenda at these public meetings, but the boatman, I suppose, figures that someone else will be there to represent his interests and lets it go at that. Fortunately, this is the case, but one of these days some measures are going to be discussed that might not be very popular, and unless a good representation of the public is there, you're going to be left out. Think about it.

GOT A LETTER from an avid reader of FLORIDA WILDLIFE up in Nashville, Tennessee 'tuther day showing a great deal of interest in our recent discussion about cruising the Chipola River. He wants to bring his 18' Glasspar with a 90 h.p. Johnson to cruise that lovely stream.

I wrote him back with an emphatic "UH UH!" and that same goes for others who might be considering such a cruise. Lovely as this stream is, you simply cannot take a large outboard on it. You'll have trouble with a small one trying to run the rapids around Clarksville, so my advice is to forget it. For the more adventurous and hardy ones amongst us, however, a small boat trip (preferably



On our last journey along the Oklawaha, we found the river filled with clogging trees but portions were easy cruising.

When the St. Johns River portion of the Cross Florida Barge Canal is completed, boaters will again be able to cruise through the beautiful waters of Chain O' Lakes.

canoe) on the Chipola is an ideal outing. It is especially so after you get into the Dead Lakes. Canoeists can really have a great adventure running these waters. There is a good tidal movement, and you have to use a lot of elbow grease in the Dead Lakes, but to a canoeist this is nothing.

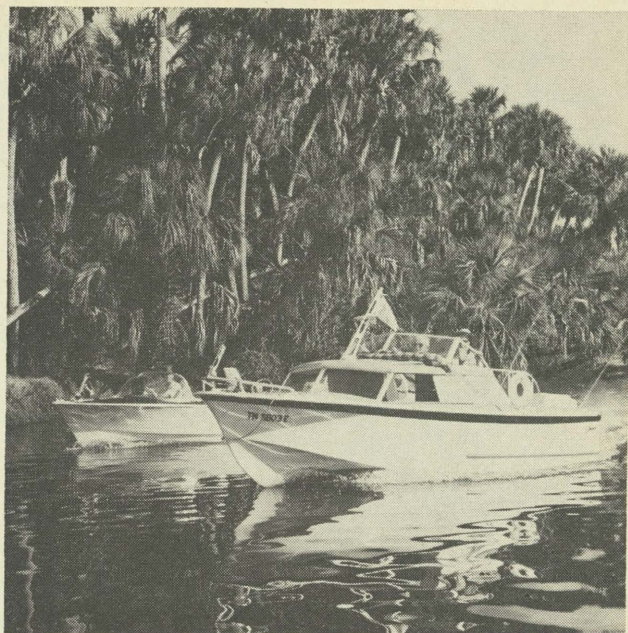
Also, at high water you can easily negotiate the tumbler dam at the south end of Dead Lakes with a canoe, and this leads you into the Chipola cutoff and on into the Apalachicola River. Many scout groups schedule outings of this type in spring and summer, and right now would be a good time for planning a scouting expedition down the Chipola, through the Dead Lakes, and on to Apalachicola. I can't think of a better wilderness area in the country for a scout-canoe adventure.

HAVE YOU MADE any plans to run the new St. Johns River lock section of the Cross-Florida Barge Canal? If not, better get with it. The lock on the St. Johns portion of the Canal opened back in December and the Rodman pool has been filled and is navigable.

The canal itself is really a beauty. The landscaping is already underway and the Rodman pool has now formed into a good-sized lake. Several outstanding recreational camping areas are being constructed around the lake and you can bet the family mortgage that in another two-three years this is going to be one of the finest boating areas, not to mention the fantastic fishing and camping.

I know there were (and still are, by gum) a lot of folks who fretted, hooted and hollered about the destruction of the old Oklawaha River when the canal construction began. Well, they had a point, perhaps, and the last run I made on the Oklawaha before the St. Johns lock of the canal was opened was an impossibility. The river was almost impassable in spots with floating logs, fallen trees blocking passage, and a veritable sea of hyacinths. There is no one county or no one agency going to keep the Oklawaha cleared of all this debris. As it got worse, boat traffic lessened, and it got to the point (before the lock was opened) where boating was impossible.

So where did that leave us? We had a beautiful, twisting river full of floating logs, hyacinths and no boats. Even fishermen were going elsewhere. But with the construction of the canal this debris will be eliminated, waters will be opened, and the water of the Oklawaha south of the canal leading to the central Florida Chain O' Lakes will be stabilized to a point where we will once again be able to traverse the Moss Bluff Locks and resume those magnificent boating cruises to Lakes Griffin, Dora, Harris and the unforgettable Dora Canal.

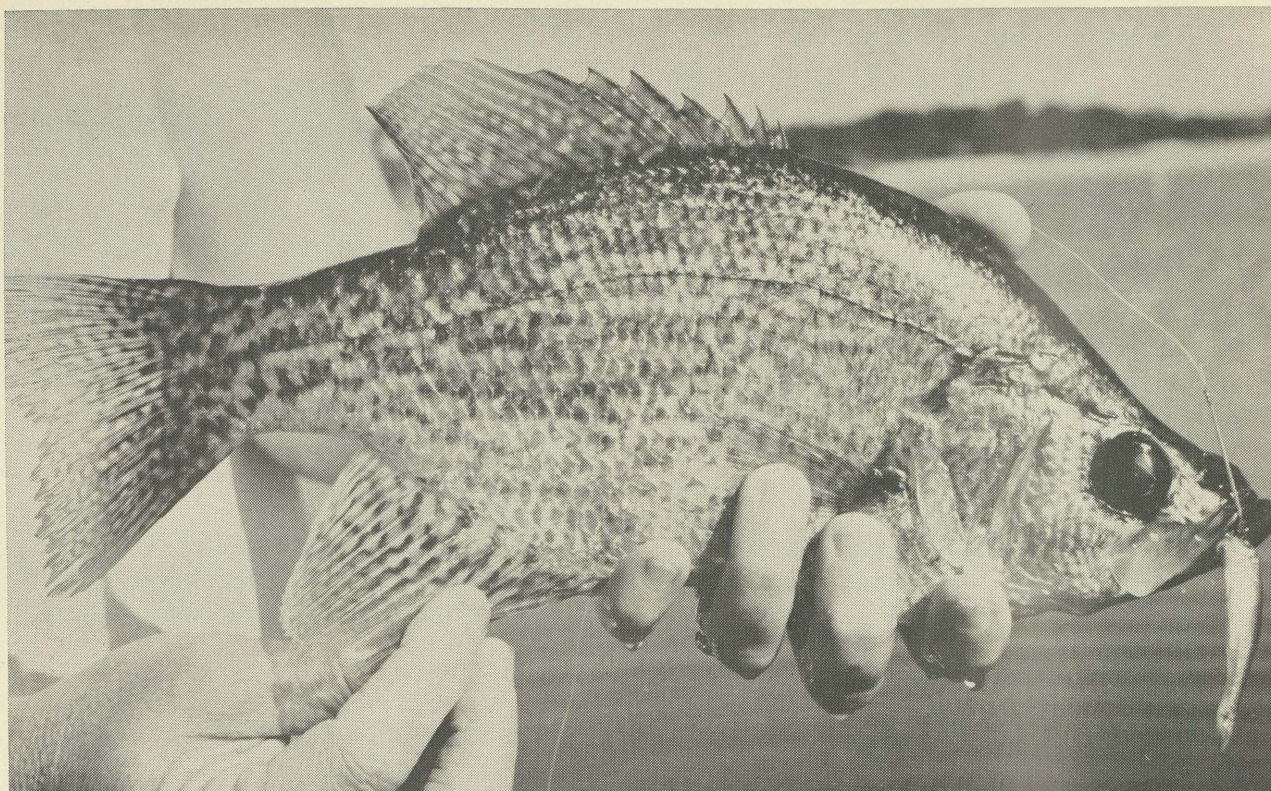


Is that bad? Sure, it means a portion of the old Oklawaha has been used for the canal, but the Rodman pool, where the old Oklawaha was, is going to be a fine outdoor recreation area.

I remember all the wailing and tales of woe that came about when the TVA started gnawing away in the Smokies to create the power dams that have brought untold wealth to the hill country of Tennessee. Magnificent lakes like Chickamauga have been enhanced by the backwaters of the TVA, and boating in the hills of Tennessee, mind you, is just as popular as it is on the rivers and streams of Florida. The TVA recreational potential exploded in that mountain country like the atom bomb, and when I was up there last summer I saw really beautiful lakes created by the TVA, and around these lakes were magnificent resorts, marinas, yacht clubs, fishing camps, camp grounds and nature trails.

HEARD FROM GOOD friend Pat Dodson over Pensacola way not long ago, and Pat is fast becoming one of West Florida's most enthusiastic outdoorsmen. For years he has been plugging the attributes of Pensacola and the Miracle Strip area, and now he's not only pluggin', but he's a-buildin'.

With Pat (his first name is Mayhew, would you believe?) now behind this big new marina near the beach, I can see where the boating boom is finally getting off the ground (or should we say water) in Pensacola, and that fine port city may well be on the way to becoming the boating center it ought to be. Pensacola waterways are especially attractive in spring and summer, and small boat fishing in the Gulf of Mexico just across the bar from Pensacola Bay is among the best in the world. ●



every inch a king . . .

By ART HUTT

Cooperative Black Crappie

WHOEVER DUBBED the black crappie as the "king of the Florida panfish" surely spoke for the mass of loyal subjects who avidly follow this speckled beauty throughout its wintertime reign. While it does relinquish its cooler-weather crown to the summer panfish rulers, the bluegills and shell-crackers, there is great rejoicing throughout the land called Florida when the crappie crown is donned once again.

In open water or poking along weedy shorelines or through lily-padded hotspots, anglers gather in boats to hoist the noble fish aboard. Others collect on piers or bridges on sunny days or lantern-lit nights to pay homage to this pugnacious monarch. They bear cane poles, spinning rods, fly rods and conventional bait-casting tackle. Their offerings may be a sophisticated selection of spoons, spinners, streamer flies, small plugs—or a dozen minnows in a leaking bucket. Truly, the king of the panfish!

But what of this fish that literally has as many names throughout its range as Heinz had varieties (see accompanying list)? Floridians have settled on "perch," "speck," or a combined "speckled perch" even though this regal ruler is in the bass-bluegill family and not at all related to the perch!

Is it any wonder biologists try to reduce these handles to one common name like the black crappie, or pinpointed further, *Pomoxis nigromaculatus*?

To complicate the issue, there is a white crappie, a pretender to the throne.

As a Florida-fishing youngster, I had just enough intelligence to know there were the two species, but identification seemed much simpler then. If it was a darkly colored fish—a black crappie, of course! A lightly colored fish, a white crappie! I shared my wisdom eagerly.

You can imagine my gross embarrassment later when I found out (1) that identification by color is totally unreliable and (2) that white crappies are exceedingly uncommon in Florida anyhow, those few caught literally being borderline cases between Florida and Georgia.

Apparently time has not aided distribution. Bill Woods, Chief of the Fisheries Division of the Florida Game and Fresh Water Fish Commission, tells me that "our records indicate that the white crappie is rare in the Choctawhatchee watershed and I suspect they are present in Lake Seminole although they were not listed in our study of the area."

Basically, the black crappie is an east-of-the-Mississippi-River fish, although it has been successfully stocked in most states all the way out to the West Coast. In Florida, it is spread throughout the state. At one time, it was only found south through Lake Okeechobee but now has worked into Dade County.

To my way of thinking, the black crappie (pronounced with a broad "a") is as aristocratic in color and shape as you can get in the fresh-water fish world. The silvery sheen broken up by irregular dark splotchings, the milky white belly, huge dorsal and anal fins, deep body, and upturned mouth add up to a generally striking appearance.

And, by the way, if a wise guy gives you any static about his "white" crappie, squelch him with these few profound observations (if you aren't too close to the Georgia border, that is).

Point to the dorsal fin. It is made up of a series of stout spines followed by a series of soft rays. A white crappie has six or less of these spines, a black crappie has seven or eight. You can further impress your tormentor by pointing out the upturned mouth, the deeper body, the irregular markings, and the relatively long dorsal fin as compared to the white's less oblique mouth, shallower body, dark vertical bars, and shorter dorsal fin.

At first glance, you might even say that the white crappie looks like an anemic, sickly version of the black crappie.

Black crappies lurk in deep water, moseying into shallow waters to spawn as the cooling water temperature—somewhere in the mid-sixties—dictates. Some spawning may start as early as September and last through spring but the peak months are January and February. The male selects and clears with his tail a saucer-shaped site near vegetation (this is the fish with the bruised or frayed tail), then entices a female to lay her eggs therein, while it busily enters into the job of fertilizing them. A huge female may produce as many as 158,000 eggs but a more normal effort from a half-pound fish hits between 20,000 to 60,000 eggs. It takes them about two weeks to hatch.

Once the egg sac is used up, the tiny crappies nibble on anything in sight that will fit into their mouths—other fish, crustaceans, insects. When they're about 4 inches long, they change to a fish diet, with shad high on their preferred list, followed by fresh-water (or grass) shrimp.

According to one researcher, black crappies in Central Florida lakes reach about 2 inches the first year, over 6 inches in 3 years, and over 13 inches in 9 years. Lake George crappies keep about 2 inches ahead of these figures.

Another researcher suggests that the fish may reach 4½ inches in one year, 8½ inches in 2 years, and 10 inches at age 3.

While the average weight of a Florida black crappie is between ¼ to ¾ of a pound, I've read a

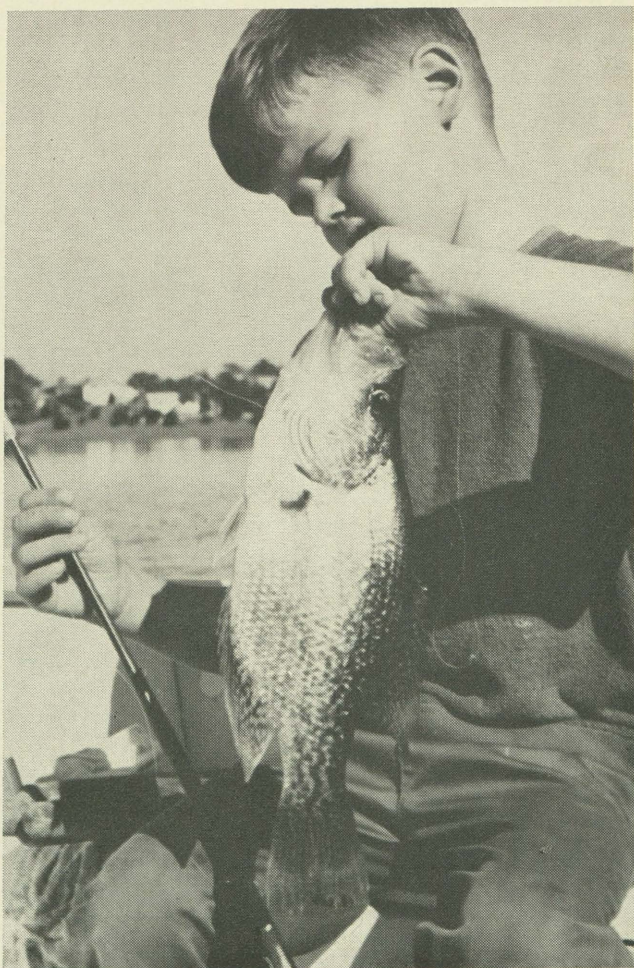
reliable report of several 4¼-pounders taken years ago out of East-Central Florida's Lake Tarpon. But unhappily, the recognized world's record as compiled by FIELD & STREAM came from the Santee-Cooper reservoir in South Carolina. Caught by Paul E. Faust in 1957, this 5-pounder was 19¼ inches tall, had a waistline of 18⅝ inches. Are you wondering if there is anything swimming in Florida waters to beat that, too?

The in-season crappie can be caught by as many methods as this fish has names. Starting with artificials, the most unlikely to succeed is with a flyrod popping bug but under ideal conditions of shallow water and evening hours, even this is a possibility. Best bets among flyrod lures are a streamer fly with a small weight to give it depth or a flickering spinner worked along weedy stretches.

A tiny lead-headed jig or a split-shotted or weighted streamer fly on a spinning rod pumped slowly near the bottom can set even the most snobbish crappie's mouth to watering, too. Use yellow, white, red-and-white; a pale blue job I have is a top producer.

The tiny jig is especially versatile. It can be trolled or cast singly or in tandem in open water; or on cane poles, can be worked around vegetation. To

(Continued on next page)



A black crappie, as shown above left, has 7 or 8 stout spines in front portion of dorsal fin. A white crappie, that is rare in Florida, has 6 or less. King of panfish, black crappie is an ideal family fish—Barto Smith holds his small lake prize.

(Continued from preceding page)

add a crappie-attracting commotion, use a float as a surface disturber in the shallower water.

Another favored crappie catcher is the barrel-bodied spinning lure with the fluted blade and feather decoration on the treble hook. White or yellow, it seems to make no difference to the incautious crappie. Use a slow retrieve or troll with these or some of the small-bodied, slant-headed, vibrating plugs.

In fact, many anglers troll to locate the perch, then settle down in the area to throw out some live bait.

There is no getting around it—the basic and best all around crappie bait is a small minnow. Artificials may have their moments, true. But minnows will lead to consistently fuller and heavier stringers.

Years ago we had to net or fish for our bait in shallow drainage canals or ponds. Collecting was part of the fun. We used the smallest hook possible, piercing a thread-like length of worm onto it. Put in likely waters, the gluttonous little minnows would suck the worm into their mouths and could be bait-bucket bound before they could—or would—let go. The hook merely held the worm.

Today it is handier to go to your bait dealer and plunk down a dollar for two-to-five dozen hatchery-raised minnows—usually fathead minnows, commonly called “toughies,” or “Missouri minnows,” despite the bulk of them being shipped in from Arkansas or Minnesota. The more expensive minnows will be of uniform and larger size; the cheaper

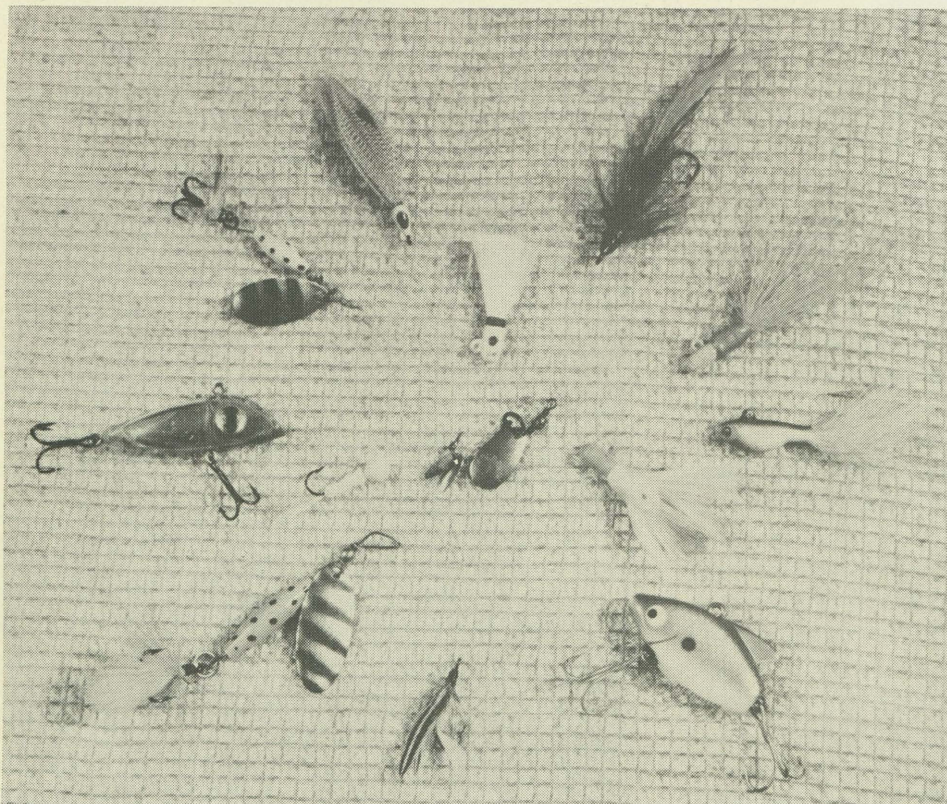
bait is usually smaller and an ungraded mixture of sizes.

Of the several ways to hook minnows (through the back or lips), I use the through-the-eyes technique. If you run the barb of the hook into one eye-socket and out the other, taking minimum care to avoid piercing the eye-ball itself, your minnow will stay lively and on the hook longer because of the stronger supporting skull structure which surrounds the hook.

Don't panic if you run out of live bait. A dead, even headless, minnow can be as good as a live one if you keep it moving. Where minnows are very small, try two on a hook. A small sliver of pork rind kept in motion will fool a crappie; or, if desperate, cut a narrow minnow-lengthed strip from a crappie's belly. Freshwater shrimp, if you have a net along, can be plucked from a weedy shoreline for a crappie come-on. And you can always try one of those little artificials.

On the question of hooks, use a No. 1 or 2 Carlisle in gold or silver. A crappie's mouth is relatively large and a hook of that size is not amiss. A fine wire hook works to advantage. If you get fouled on a lily pad root, a steady pull will bend the hook and free your rig. It beats tying a new hook on all the time. Once your hook is back in the boat, you can reshape it with a little finger pressure.

There are two techniques for taking crappies with live bait—drifting and “still-fishing.” Depending upon water depth, cane poles will work for drifting in open water if they have enough line. A spinning outfit is an ideal choice, however. With a small split



A variety of lures from streamer flies to small plugs, left, will attract crappies. On fly rods, a spinning outfit, and cane poles, these lures can be trolled and cast in open waters. In shallow water, jigs are frequently used on cane poles. The frayed tail, above right, reveals the crappie sex (male) and that it was in the process of fanning out spawning bed when caught by a fisherman.



shot or two (depending upon the breeze) with this rig you have the ability to keep your bait close to the bottom where it should be.

A bleach bottle with a piece of line and heavy sinker makes a readily-available marker to toss out where you catch a crappie or two. Drift through the area again for more action.

Some anglers will turn the first open-water crappie they catch into an unknowing traitor. They take a thread and a small balloon, tie it to the unsuspecting fish, and throw it back into the water. As the Judas crappie swims around with its school, the angler-opportunists fish near it.

Frankly, this has never worked for me and may merely be of value because of its novelty.

Since these socially exclusive fish are always in the lake somewhere, it has aroused my curiosity why they are not fished for on a year around basis. They have to eat and therefore should be catchable. Seems like a waste unless perhaps the fish are less attractive eating-wise when they come out of the warm summer water.

Nothing works better for crappies when they are in a spawning mood and moving into the inshore vegetation—lily pads, bullrushes, maidencane—to spawn than a simple cane pole. While you may not agree with my selection of line and sinker, here's what I use—and why I use it.

First, monofilament line (no argument there!), but in twenty-pound test, especially if you are fishing around vegetation or snags. When your hook gets wrapped around something it shouldn't be, a stout line to haul on, plus that bendable wire hook, is a practical pleasure.

Secondly, I like a relatively heavy sinker that will plummet my bait down through the small space I usually allow for it. Also, on windy days, there is nothing more frustrating than a wildly gyrating minnow circling above a small hole in thick pads, trying to come in for a landing. The heavy sinker helps immeasurably in such circumstances.

Of course, the float should be of a slim design to cut down on water resistance which could alert the crappie that something is amiss and cause it to spit the minnow out.

You'll catch more crappies if you keep your boat and your lure moving. If a crappie is around, it will take your bait within a minute (that's the way I figure it, anyhow). So fish out the holes within reach of your cane pole and move ahead to a set of new ones. Also, most people let their minnow do all the work. This is all wrong. Jigging your bait along through the longer holes will keep your catches well above average. Move your float ahead about four inches, then let it settle back. Repeat until you run out of room or the bobber disappears. I have the feeling the heavier sinker imparts a more definite action to the bait and works to advantage here also.

Always give the crappie a run of a foot or foot-and-a-half before you set the hook. A too-quick reaction will yank the bait right out of its mouth.

If things seem uncommonly quiet, vary the depth at which you fish. Normally, a crappie will be close to the bottom with spawning activities in mind but frequently a shallow-set bobber will catch more. But don't ask me why.

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In my opinion, crappies are tolerant of noise. For years I fished out of a 28-foot inboard cabin cruiser on Lake Eustis. Quite comfortable crappie fishing—lounging around on soft boat cushions, etc. To avoid unnecessary drain on the battery, instead of starting the engine each time to move a few feet through the pads of Goose Prairie, I'd throw an anchor out the back and pull the boat to it.

It wasn't a very quiet anchor. When it hit the water, gallinules cackled derisively, blue herons flapped off with disgusted squawkings, and anglers across the cove jerked their heads in our direction to see who had fallen overboard.

But, would you believe we always caught more fish than anybody?

So, if you want to whisper through the pads, be my guest. But, I'm sure the black crappie couldn't care less.

There are many specialized techniques for catching the cooperative crappie. To go way back, trolling for them with small spoons in northern Indiana's Cedar Lake was popular in the 1920's. From sailboats, yet!

Ted Hensen, tackle rep and Florida fisherman deluxe, worked out a lazy man's method of fishing for them in Lake Apopka many years ago. He put monofilament line onto two cane poles, tied a tiny jig on each, propped the poles on opposite sides of the boat so they stuck out just above parallel to the water—then he'd drift, gently rocking the boat from side to side. When a pole tip would stay down, Hensen would calmly lift in a crappie.

On a trip with Jack Dequine, former Chief of Fisheries of the Florida Game and Fresh Water Fish Commission, to the St. Johns near Lake George, we used short poles, stout line, many hooks, and a few choice cuss words to fish way back into the banks where you'd swear no self-respecting crappie would ever venture. Under palm roots, in minute holes in solid hyacinths, threaded through diminutive spaces in log jams and brushpiles, our minnows attracted a mess of those sizable black slabsides for which the river is famous.

Crappies are one of the few fish which will cooperate on a 24-hour basis. Nighttime fishing in Florida is on a slow but deserving upswing. I've been unable to discover what there is in the crappie's make-up that will attract it to a light and not, say, a bluegill or bass. Nonetheless, hang a bright light over the water in crappie country and chances are you will be in business.

First the insects will bounce off your light and hit

in the water. Minnows will slowly collect. Watching a bobber bounce in the light's glare is a fascinating and rewarding way to spend a few hours at night.

While you may see crappie-lights hanging from Lake Okeechobee on up through the state, the most specialized night fishing I have run across is done at the Howey Bridge, a half-mile concrete span between Tavares and Howey-in-the-Hills on State Route 19. On a warm, late-winter night, enough lanterns hang there to make it look like a Miami Causeway. Coffee brewing on camp stoves, metal braces holding lanterns out from the bridge, sleepy-eyed but interested youngsters, a silvery fish flopping in the lantern's glare—these are a part of the scene.

Admittedly, this handsome handful isn't the fightingest fish you'll find in Florida. Its struggle is adequate, but that's about all you can say for it. This shortcoming is largely overshadowed by its willingness to bite, however.

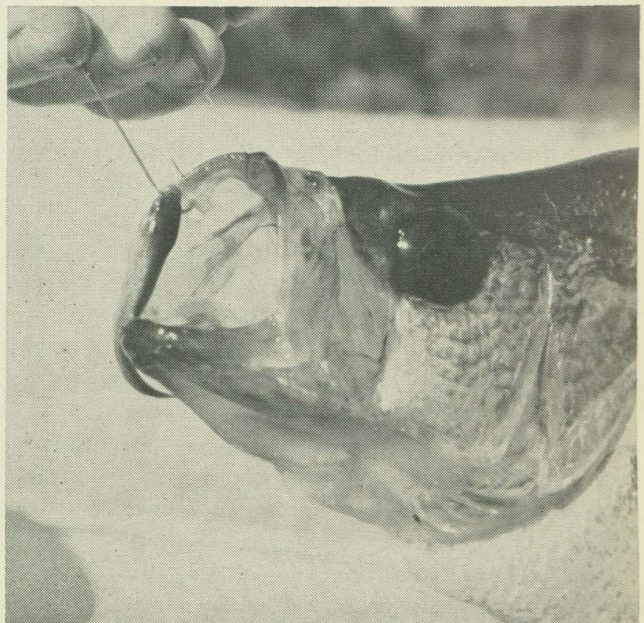
One caution, though. A crappie's mouth is somewhat tender so don't yank your fish aboard too forcibly. The hook will rip out.

Smallish crappies can be scaled and left unsplit for cooking, but on the bigger ones, I like to cut a steak off each side, then skin the slab by pulling a sharp knife blade down between the flesh and the skin.

I think there are fish that will beat a dipped-in-batter-and-fried crappie but I've not yet been known to turn my nose up at such an offering.

The appeal of the black crappie is that it is plentiful, cooperative at all hours, fairly easy to catch, will suffer through noise, dead minnows, and awkwardly presented offerings, and you need only a minimum investment in tackle. This regal rover is turning out to be an ideal family fish.

Long live the panfish king! ●



Delicate framework and tissue of crappie's mouth tears easily—has given rise to the nickname of "papermouth." Land a hooked crappie cautiously.

Who Owns The Game?

Part 2

By ERNEST SWIFT

National Wildlife Federation

CAN THE FEDERAL government, as a landowner, now assume (in the face of tradition and previous legal opinions) jurisdiction over resident game and fish within the boundaries of the lands owned by the Federal government in the several states?

2. If this assumption is given legal status by the U. S. Supreme Court in review of the pending case of the State of New Mexico vs. the U. S. Department of the Interior, will it eventually lead to all landowners, private or otherwise, being given title to the game and fish residing on their lands as is now the prevailing doctrine in Europe?

3. What powers would the States have left with which to carry on recreational and other types of resource programs which are subsidiary to the management of fish and wildlife?

4. What would be the impact on the present tourist business which has been developed on the traditions of public ownership of wildlife and, in many states, public ownership of water?

History records a long discussion of these matters. A convention to protect the fur seal on the high seas was called in 1911, and a treaty was signed by the United States, Great Britain, Japan and Russia. Similar treaties have followed, some of them rather recently, to provide protection for whales, halibut, salmon and other deep sea life.

An early U. S. Supreme Court case—*Lacoste vs. Department of Conservation of the State of Louisiana*, states: "By right of ownership, and in the exercise of police powers, a state may regulate the taking of wild animals within its borders, their subsequent use, and the property rights that may be acquired in them."

One of the first, if not the first, attempts by the Federal government to control wildlife within the boundaries of the U. S. was the passage of the Weeks-McLean Act of 1913. This Act declared: "All migratory game and insectivorous birds to be within the custody and protection of the government of the United States and forbade their destruction or capture contrary to regulations prescribed by the Secretary of Agriculture." This Act was declared unconstitutional by the U. S. Supreme Court as an invasion of the rights of the States.

As a result there followed the Convention of 1916 between the United States and Great Britain providing for the protection by the U. S. and Canada of migratory game birds, migratory insectivorous



Who owns Florida deer? We, the people of Florida! But Federal authorities have long coveted ownership and control of native wildlife on national forest-park lands—a la Sherwood Forest.

and migratory non-game birds. This treaty was carried out as in the case of oceanic fishing under the powers of the U. S. Constitution.

In 1918, with the Treaty duly signed, the U. S. Congress proceeded to pass the Migratory Bird Treaty Act which authorized the Secretary of Agriculture, subject to the approval of the President, to promulgate regulations for the protection of all migratory birds covered by the Convention. Mexico signed a similar treaty in 1936.

Again the authority of the Federal government was challenged in the case of *Missouri vs. Holland* but, on the basis of the Constitutional Treaty powers, the U. S. Supreme Court confirmed the Migratory Bird Treaty Act of 1918.

In 1919 a movement was started by H. S. Graves, Chief of the U. S. Forest Service, along with F. E. Ohmsted and Gifford Pinchot, to bring about, under the jurisdiction of the Federal government, the control of timber cutting on private lands. This led to a bitter fight, with forest industry on one side and the Forest Service and some private backers on the other. The proposal never became law, and there were members of the Forest Service who were not in sympathy with the idea. This caused some deep rifts within the Service. However, it ultimately brought about vastly better forest fire protection through the Clark-McNary Act and improved forest management as a result thereof. Although this incident is not closely allied with the game management, it shows a trend of thinking that has periodically cropped up.

Hunt vs. United States (1928), more commonly
(Continued on next page)



Artwork By Wallace Hughes

By earlier Supreme Court decisions, states have retained rights of managing, policing and taking all native game within their borders, even on Federal lands. Once again the courts must decide on who owns the statewide wildlife.

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known as the Kaibab Case, involved the killing of deer by the Forest Service on the Grand Canyon National Forest Game Preserve which in reality was an overlay of the Kaibab National Forest. The issue was the destruction of the natural reproduction and forage plants as well as thousands of deer dying from insufficient forage. Deer were ordered killed under the direction of the Secretary of Agriculture, and Arizona officials threatened the arrest and prosecution of anyone killing, possessing or transporting deer. Three persons were arrested. In a suit by the Federal government the lower court found in favor of the Secretary of Agriculture. In an appeal, the U. S. Supreme Court in essence ruled that the Federal government could protect its own property from destructive overbrowsing by deer, but it did not say that there could be a general open season to licensed hunters to kill deer in violation of the State's laws. This meant that only regular employees of the government could participate in the killing; and also that deer shipped beyond the boundaries of the refuge should be marked so as to show that they had been killed under the authority of the U. S. officials within the limits of the reserve.

This article, and others that will appear in the next several issues, were prepared by Ernest F. Swift shortly before July 24, 1968, when he passed away at Rice Lake, Wisconsin.

To some people all this may sound like legal and technical niceties but, nevertheless, it preserved the integrity of the state in the general management of game, the issuance of hunting licenses, etc. Crop and tree damage still is something of a moot question even at the state level on private lands. Some states pay for crop damage by wildlife, and some state courts have gone so far as to say that when there is no recourse the landowner can protect his property from wildlife damage.

Nor can the Federal government gain much comfort from citing the Pisgah National Forest Case in North Carolina. When that National Forest was established, the State of North Carolina ceded all rights and title to the land, as well as complete jurisdiction of the wildlife to the Federal government.

Presumably on the basis of the Court's decision in the Pisgah case and during the general era of expanding government activity along with the CCC camps, the then Secretary of Agriculture, Henry Wallace, attempted to impose similar regulations on all national forests under general order G-20-A. This caused a general uprising among the states and was one of the main reasons which caused the states to forget petty differences and combine their strength in the International Association of Game, Fish and Conservation Commissioners. Seth Gordon, then President of the International, led the fight, and a good one it was.

The order was subsequently withdrawn and for the time being Federal powers, so far as an imposition of the state's rights to manage their own wildlife resources, was dropped. But it has never completely died. ●

Good management of resident fish and game for the benefit of all people requires public support and awareness of all program needs. Integrity of state-owned fish, clean water and bottomlands—public ownership facts—must be preserved.





Are wild turkeys just for looking at? Some would have it so! But without hunting license and firearms money, which support turkey research and management, all but a few Florida counties would be devoid of wild turkeys. Today, they roam in all the 67 counties.

Photo By Lovett Williams

By GENE SMITH

HUNTING . . . Fair or Foul ?

THERE IS A GROUND swell of opposition to lawful hunting in Florida. Protectionists, or preservationists, those who claim to detest all killing, would have you believe it is evil to shoot a deer but not to butcher a beef; to bag a wild duck but not to kill a chicken; to take squirrels with a rifle but not to kill a farm pig for winter meat—with the same rifle.

Some among the protectionists' ranks even deny that hunting constitutes a sport. They vilify hunters, usually without qualification, at every opportunity, classing them as little more than sadistic idiots loose in the woods and lusting for blood—except, possibly, for “government hunters,” those paid guns who are to keep the deer herds in balance with their food supplies after all public hunting is outlawed, according to one protectionist writer. (This tack, incidentally, clearly contradicts another part of the protectionists' own catechism: They usually deny, or ignore, the existence of a harvestable surplus in *any* wildlife species.)

Protectionists, who, despite the accepted definition of the word, persist in labeling themselves conservationists, come in at least two varieties.

The first is typified by the poison-penned author/crusader whose paranoiac prose appears in national non-sporting magazines from time to time.

A prime example appeared in *THE SATURDAY EVENING POST* of October 21, 1967, under the forthright title, “Hunting is a Dirty Business.” Samples: “. . . Beyond the fact that sport hunters are, as a rule, disreputable, the most obvious complaint against them is that they are destructive of wildlife . . .” And “. . . The results of our national wildlife policy, almost totally dominated by hunters, have been disastrous . . .” And “. . . Hunters are noisy, belligerent and the dirtiest of all outdoors-users, littering the landscape with bottles, corn plasters and aspirin tins . . .” And “. . . hunters all must be skinned of the right to use the forests

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and fields as if they were a personal preserve, a private butcher shop."

Another kind of protectionist is the milder, well-meaning person, either male or female, who, though not acrimonious, is no less convinced than the writer in *Post* that hunting is evil. An example of this type's thinking recently came to FLORIDA WILDLIFE's attention in the form of a well written, unemotional, signed letter from a subscriber to the editor. It read:

"After reading the recent issue of FLORIDA WILDLIFE, received in the mail today, I note the greater part of your magazine this month is devoted to hunting. (November 1968 issue)

"As a resident of the State of Florida for 23 years, I have become increasingly concerned and interested in the preservation of the wildlife and natural resources in our State, and I am finding your magazine less and less attractive to a conservation-minded reader.

"Rather, it is disheartening to read of the ways and means you set forth for the hunter for a more successful kill. It all serves to further confirm my belief that hunting is no 'sport' at all. The hunted is given little chance of escape, and it merely serves a few at the expense of others.

"We subscribed to your magazine some years ago hoping to further acquaint ourselves with the wildlife in Florida and expecting to read informative articles on the subject. I find little in your magazine to satisfy this.

"I regret that I recently renewed my subscription, and after its expiration, will discontinue."

FLORIDA WILDLIFE appreciates hearing from readers, even those who are registering dissatisfaction with the publication. Everyone is entitled to his opinion—and who among us would have it any other way? So, what we offer by way of comments—about the letter, about hunting and conservation, and about the magazine—is not intended as an assault upon anybody's personal convictions about the immorality of killing certain wild animals and birds with a gun or bow. We only wish to speak *our* piece, too.

First, we would point out the difference between "preservation" and "conservation," two terms the letter writer used almost synonymously in the same sentence.

The modern concept of true conservation of any renewable natural resource includes *wise use* of that resource by man. Wildlife is such a resource. Conservation of wildlife, therefore, not only allows for, but *calls for* a regulated harvest of some wildlife species. For example, deer benefit when annual surpluses are removed from the range by sportsmen. This is a demonstrable fact of biological life. Since hunting is indeed an enjoyable form of recreation for thousands of Floridians; and since the modern firearm is the most *efficient* tool for reducing over-

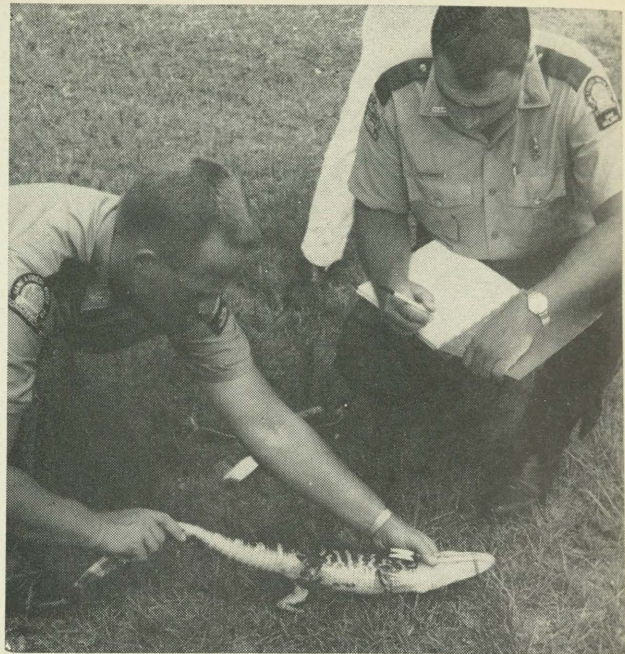


Photo By Lovett Williams

The fully protected wildlife species—song and wading birds, pelicans, alligators and eagles—are beneficiaries of the hunter's expenditures for licenses, stamps and permits. Research and patrol extend to non-hunted species, which far outnumber those classed as wild game and birds for hunting.

crowded deer herds, we must ask ourselves this question: Why *not* permit and encourage hunting?

But aside from the clinical aspects of population dynamics, it is important to realize that almost invariably there are annual harvestable surpluses of the wildlife species commonly thought of as *game*. By application of the *wise use* concept, we'd be foolish not to take some for our sport and enjoyment—and for our tables! None of the living things of nature can be *preserved*, nor should they be. Floridians should work to preserve wilderness areas and other wildlife habitat, but the creatures produced therein cannot be preserved like pickles! Their populations are continuously coming and going, rising and falling. If we don't use them, we lose them. That's why we say preservation is not conservation.

Now, preservation and protection both have *parts* in the conservation picture as we see it. We mentioned preservation of the outdoor environment. We add that protection of wildlife is vital, too. That's why we have laws and law enforcement; closed seasons and bird sanctuaries; fully protected species and limited harvests of those that are trapped or hunted. But protection isn't the whole show. After protecting our wildlife and its habitat, after managing and manipulating both for maximum production, simple logic calls for a sensible harvest to be enjoyed. Hunting constitutes the third side of the wildlife conservation triangle!

The growing protectionist/preservationist move-

ment in America amounts to quasi-conservation. It is usually based on sheer sentimentality, a phony "reverence for life," disenchantment with some particular hunter or group of hunters (and there are outdoor slob in all elements of outdoors-users), or plain old ignorance—or some of all four. In any event, it is a shallow, do-little crusade whose devotees pay few of the country's mounting wildlife conservation bills.

The letter writer's statement that hunting "... is no 'sport' at all ..." and that "... it merely serves a few at the expense of others ..." appears from here to be precisely turned around!

Hunters, who are *the few*, have long supported nearly the entire wildlife conservation movement in this country, to the obvious benefit of all *others*. The quasi-conservationists have had a free ride!

Let's consider Florida. Not only have all our *people* profited from the hunter and fisherman-supported work of the Game and Fresh Water Fish Commission, so have all non-hunted forms of wildlife. Sportsmen's dollars pay for pelican and alligator research and protection as well as for deer and wild turkey research and management. Wildlife officers are paid to protect meadowlarks and robins and a few hundred other songsters as well as to check the hunter's bag for quail, duck and dove kills.

There are more deer and turkey in Florida today than at any other time in our history—not because we chose not to kill anything, but because of changing land use practices and because hunters spent their money for hunting licenses and stamps so that modern wildlife management could come up with some answers to balance, nutrition, harvest and distribution problems.

If hunters are ever pressured into quitting their sport in great numbers—due to unduly restrictive firearms laws and/or the protectionist movement—what true conservation of our wildlife resources remains will have to be paid for from general revenue and not from hunting and fishing license dollars, as now. This will mean the increasing of everybody's taxes by substantial amounts. But the sad part will be that the *quality* of conservation will decline. Public apathy will then probably kill the grand movement hunters started and have supported through the years—and eventually, protectionists might find themselves with very little to protect.

So, FLORIDA WILDLIFE makes no apologies for writing about hunting in the fall and winter issues. The Game and Fresh Water Fish Commission, which is the publisher, is charged by law with con-

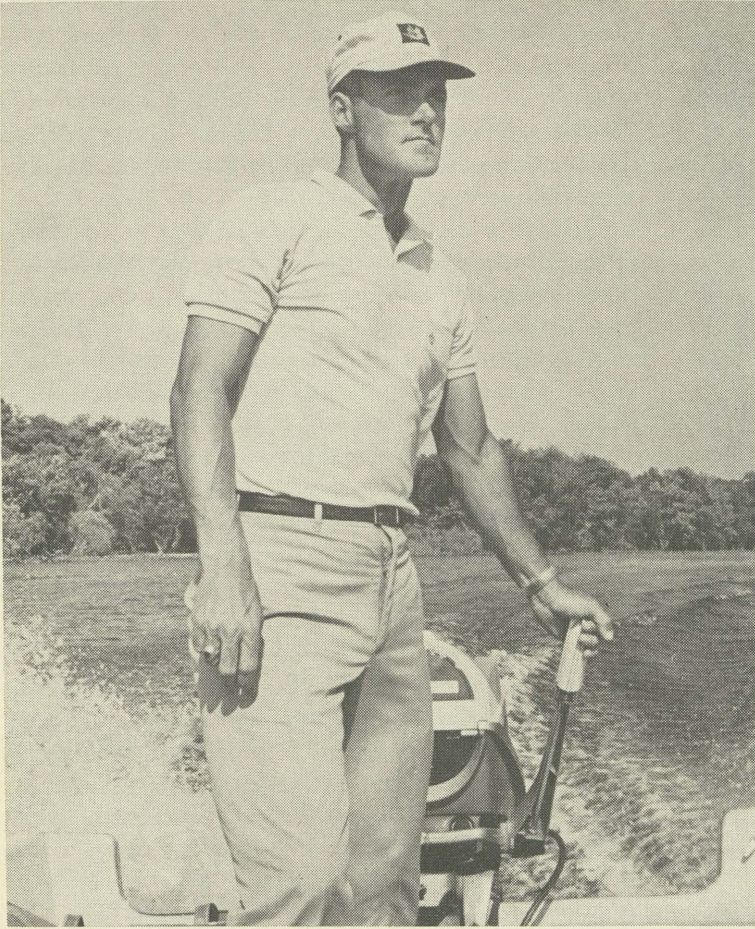
serving, managing, restoring and regulating *all* wildlife and fresh water aquatic life for the people of Florida. But the agency is supported by the hunter and fisherman, the sportsmen of the state. It should not be surprising, therefore, that the agency's official publication seeks to serve the sportsmen first and then the general readership.

Over a 12-month period the magazine attempts to give its readers general conservation, natural history, camping, boating, fish and game management, law enforcement AND hunting and fishing articles. If the balance of the contents does not please everyone, then who can honestly be surprised? No publication can meet that test.

Finally, FLORIDA WILDLIFE welcomes all comers: conservationists and preservationists; hunters and non-hunters; oldsters and youngsters. And we agree with the National Wildlife Federation's stand on the question of "protectionism," as stated by Executive Director Thomas L. Kimball in NATIONAL WILDLIFE Magazine, October-November 1968, who said, in part, "... we do believe that if we perpetuate an optimum environment, there will always be maximum wildlife populations, with enough variety and numbers for everyone to see, enjoy and harvest as well. We firmly believe that the hunter and the protectionist should work together toward that goal ... " ●



True are claims that some hunters are outdoor slob. But there are slob in every part of society. The hunting fraternity is helping police its own ranks far more than some other groups.



Joe Kenner running his guideboat on the St. Johns.

Science of Guiding

it takes considerable
research for continuous
fishing success

By CHARLES WATERMAN

AN ENERGETIC YOUNG fishing guide on the St. Johns River for six years, Joe Kenner quit that job to work as a naturalist with the State Park Service.

Now Joe's change of employment is interesting to his friends but it doesn't rate a full length *FLORIDA WILDLIFE* article. The article will be about his fishing observations. He has taken to the guiding and fish catching business with a more scientific approach than most, and the fact he's no longer a guide takes us off the hook where we'd be blamed for advertising him.

With a degree in agriculture and numerous courses in subjects that relate closely to wildlife, this character is an unusual combination of practical fishing and learned observation. He's not competing with any fish biologists but he has enough background in biology to apply it to the rugged business of making tourists catch black bass, a business at which he's been successful. He's done a lot more research on hook and line fishing than one fellow I know of who got his master's degree on the subject. It's none of my business but I understand he went into the Park Service because his guiding season was too short.

For some time he has kept a small, private pond of big bass back of his house for observation purposes. That's like taking all your books home from school.

Kenner's work was with live bait, the means by

which 99 per cent of the guides satisfy their clients on the St. Johns. For those who say it isn't the sportiest way to fish I might point out that a guy on a short vacation in a strange land (in this case, Florida) may not be capable of stringing them up with plugs or bugs; or he may be after big fish only and I sadly confess that whopper bass are inclined to bite most readily on the real thing.

Being a sorry bait fisherman myself, I nevertheless have real admiration for the scientific experts at it and their spectacular results often cause me to hide my stringer or pretend I was only indulging in casting practice.

And about that season:

The busy time for a St. Johns River guide is roughly November 1 to June 1. He's less busy the rest of the year for several reasons. During the warm months fishing is much more spotty where the big live bait takers are concerned. Kenner hastens to add that there are days in summer when you can limit out in a breeze and others when you won't have a strike, a situation that saddens cash customers no end.

Another thing: The summer vacationists in Florida are a somewhat different breed, generally on a shorter sojourn and not so inclined to hire fishing guides. They tend to be family groups, frequently with small children unconditioned to seeing Dad

plank down the price of several tourist attractions to ride off with a guide.

So when's the best time to catch a big bass in central Florida? No secret about that. It's generally January, February and March when the big females are either spawning or feeding up in preparation for spawning. During those three months the guide can fish all day with good chance of success at any time. Kenner says he has no distinct preference then for time of day and at that time he's not much of a moon watcher. Neither does he pay a great deal of attention to tide tables during the big bass months.

But he keeps a close watch on water temperatures. He lists 68 to 72 degrees as optimum, and says that when the thermometer reads anything below 55 degrees you "might as well stay home by the fire." Remember that these are central Florida temperatures; no one will doubt that bass strike when it's much colder in some other area. I am sure there are isolated occasions when individual central Florida fish will take a lure in colder water but don't count on it. For the most part I'll go with Joe.

On the other end of the thermometer is mid-summer heat that sometimes brings the water up to 86 degrees. When that happens fishing is erratic although fish can sometimes go on brief feeding binges as short as 30 minutes. At other times it's hard to tell the old St. Johns isn't devoid of fish—not even a gar seems to be moving.

In hot weather Kenner tries to make a two-stage trip each day. He wants to be on the water between first daylight and sunup, his Number One choice for fishing time, and he wants to get out there between 4:30 p.m. and dusk.

"A feeding period in early morning is no guar-

antee you'll have a repetition in the evening," Kenner says. "Morning is the most reliable. In hot weather I generally quit fishing about 10:30 or 11 a.m., and get out again from about 4:30 to dark."

This rough schedule is what separates the dedicated, fish hungry guide from the clock puncher. A nine-to-four schedule may work during the top fishing months but will net a lot of fishless days in warm weather, and that's one reason why consistently productive guides aren't too plentiful.

Most St. Johns fishermen know that menhaden are good bass bait, but few realize just how good, and the fact is that when they're running in good supply bass are likely to swim scornfully away from their old staple, the shiner. Menhaden first show up from about mid-March to early April, and are present in the river until about the middle of June.

Kenner has long been a specialist in using menhaden as bait and employs a system of chumming I've seen work brilliantly. He collects his menhaden with a cast net when they're working in toward shore in quiet water between dawn and when the sunlight hits them. When the sun gets over the shoreline trees the menhaden shove off so a dawn patrol is almost the only successful method. The castnet used for bait catching has a fine mesh and a good one (Kenner uses a 5-footer) will cost more than \$75.

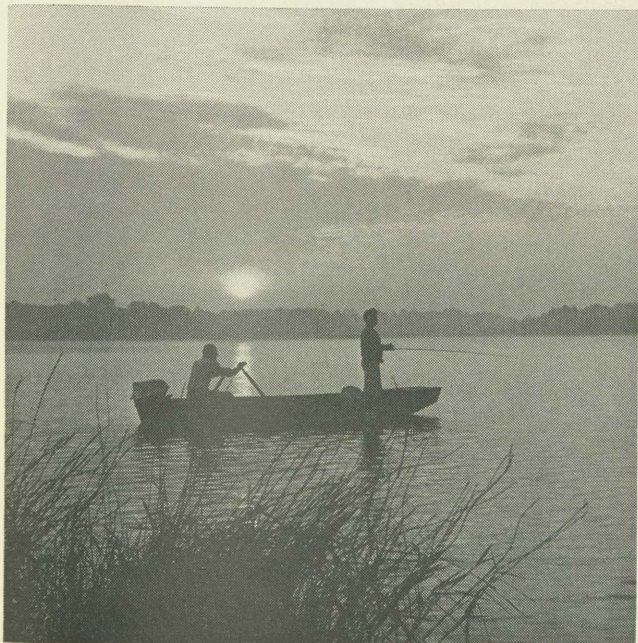
Kenner loads the fragile menhaden into his live well and takes his clients to a fishy spot, generally with considerable current, where he's been chumming bass. There he sweetens things up by chunking several double handfuls of menhaden overboard, and then puts over a couple with hooks in them. He says that the fishing will gradually improve if he has the spot to himself for a few days, new bass moving in faster than he and his parties catch them out. But comes a rainy day or no fishing for some other reason and the fish may forsake the lunch counter.

This menhaden business isn't understood by many of the "guide chasers" who follow the pros feeling that's a sure road to success. Few of the chasers (that's an accepted term on the river) have menhaden, and they seldom figure why their hatchery shiners won't produce while Joe's customers are catching big bass practically from under their boats. Shiner fishing falls off almost immediately when the menhaden run starts, and sometimes artificials won't score on the menhaden schoolers.

The menhaden used run from three-to-five inches long and Kenner hooks them through the nostril from inside the mouth. Single lip hooking will tear out and hooking through both lips will kill the bait. No float (bobber) is used with menhaden as they'll twist the line. They're weak swimmers and are fished unweighted with Eagle Claw Extra Light Wire hooks, Aberdeen style, Pattern 214.

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What is considered some scientific knowledge can mean forms of successful and relaxing fresh water fishing.



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When it comes to shiners, the small ones are fished with 2/0 light wire Aberdeen or Sproat hooks, and the big ones with 7/0 Sproats. A small shiner is probably four-to-six inches long and a big one is eight to 10 inches. The big shiner is frequently fished with a float about 1½ inches in diameter and the small shiner with one about half as big.

Even the line test changes with the bait used. Small shiners get 10-pound test line on the spinning rods Joe uses. Big shiners are fished with 18-pound line and menhaden on six or eight. In each case the bait hook is tied directly to the monofilament with no swivels or snaps, and only light split-shot sinkers when absolutely necessary.

"The less junk he has to pull around with him, the more active your bait becomes," says Kenner. "Many people buy ten dollars worth of shiners and then beat them to death casting them, sometimes with heavy sinkers. I don't cast big shiners; just put them out and row away from them. You can cast the lighter baits with spinning tackle."

Most of his fishing is what he calls "trolling." It's slow rowing and perhaps "leading" the baits would be a more appropriate term. If he has two clients they sit amidships in Joe's skiff, facing aft while he rows from the bow. He puts out about 30 to 35 feet of line in most cases. The right hand bait (facing toward the stern) is hooked through the right nostril and the left hand bait through the left nostril. Thus they swim apart rather than tangling. If there's cover on one side of the boat's route, and Joe wants both baits to swim close to it, he hooks both baits on the proper side and lets one line out an extra 15 feet so that one bait follows the other.

Now the fishermen have the bails off on their spinning reels and are simply holding their lines in their fingers, just enough tension to restrain the shiner. Unless they're quite experienced they get blow by blow instructions in hooking from the guide who has carefully adjusted the drags, and takes a dim view of customer meddling in that department. Of course when a bait is chased by a fish all bets are off concerning which way they'll go.

"Anyway, when he has a strike, anything the fisherman does besides letting go of the line is wrong," says Joe.

Then there are roughly three things the fish will do. He'll take off fast, he'll swim slowly away (the most normal procedure), or he'll drop down and lie almost still for a time before leaving with his prize. Regardless of what the fish does the fisherman keeps his line barely taut until time to set the hook. The most frequent causes of fish losses are slack line at hook setting time, and again when the fish is being played.

If the fish moves away slowly on schedule, the hook is generally set within 12 or 15 seconds. If he



heads for cover he could hang up on, the strike is made sooner. If he drops down and stays almost completely still Joe says you might as well light up a cigarette and wait until he decides to swim off. If the fish hits quickly and leaves fast you'll have to play it by ear. It's sometimes hard to keep a fisherman from yanking when there's a lot of boiling and splashing around the bait. Too much tension on the line while the bass has hold of the shiner but hasn't really taken it in is most likely to drive him away.

Once the fish is hooked anglers tend to be too easy with them, Kenner explains and that's a surprise to me. The fish must be worked with a tight line for three reasons; to tire him out, to keep the hook from coming loose and to keep him out of cover that can tangle the line.

A man rowing alone with the slow trolling method can employ an ordinary paper clip taped to his rod in holding enough tension to control the bait and this "mini outrigger" releases the line when a fish takes.

Although he thinks hyacinth control is necessary, Kenner feels that the constant sinking of dead plants builds up such a soft mass on the bottom that bass will seek other spawning areas. During the spawning periods Kenner works upstream to areas he feels are less affected by the hyacinth problem.

The edges of hyacinth blocks, he says, are especially productive fishing, and he thinks the hyacinths provide an essential part of the food chain as well as protection for the small gamefish. Hyacinths may have proven a blessing in disguise when most of the alligators were killed off many years ago as disappearance of alligators allowed rough fish to increase, and small fry need hyacinth protection from predators.

"If you want to see all of the things that live in hyacinths," says Kenner, "just pick up a handful and shake the roots over your boat. You may get anything from bloodworms to eels."

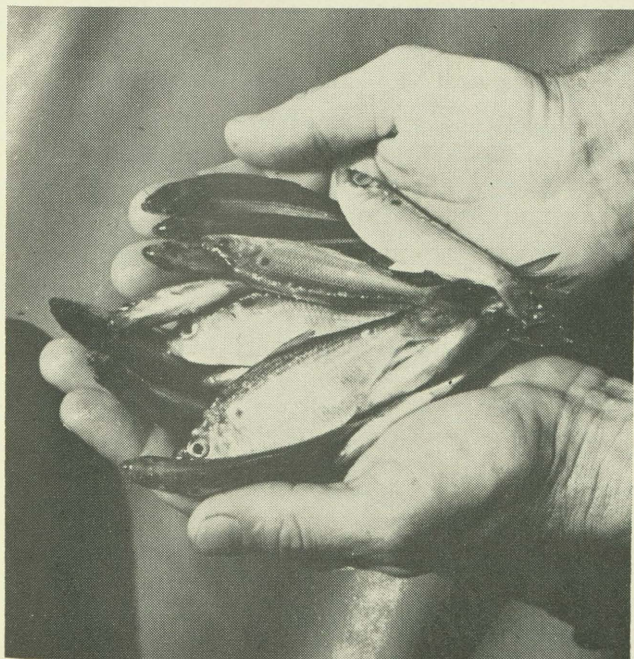
When a big bass strikes during spawning season and is missed, Kenner is right back there at the first opportunity, feeling sure the fish is still present. On one such occasion he was slow trolling in an area where a big fish had been encountered and lost, and had made a number of circles around the spot when the fish came out and struck his gently moving oar blade.

"I wouldn't tell that," he says, "but I have a good witness."

On another occasion a fisherman set the hook on a big bass and reeled in a very dead catfish. In fact, part of the catfish was already digested. It had been in the bass' stomach and the hook had snagged the catfish instead of the bass.

There's quite a black bass laboratory at the Kenner residence, a whole batch of whopping fish confined to a small pond for observation. I watched him hook one on a plug but the big fish broke the hook from the lure so Joe had to net him to get it out.

Joe Kenner, left, with St. Johns River bass. Menhaden, below, when present in the St. Johns, are a number one bait and the effectiveness of other bait falls quickly.



When menhaden are available they are fed to the big bass regularly. The fish will strike single menhaden without hesitation, even if the bait is lively, but they ignore a small school of menhaden that tools around the pond constantly.

"I figure they think they can't catch one out of the school," Kenner says. "When they move toward the school the menhaden are startled very easily. A single is easier to catch, I suppose. I have no other explanation."

There was one bass that he kept so long it became something of a pet, eating out of his hand and swimming along beside him when he walked around the pond, but somehow the fish knew Kenner from other visitors. In a test he approached the pond with several other men and all of them separated and approached the edge at different points. The bass unerringly came to Kenner and it worked even when the men wore similar clothing. Here again there are witnesses.

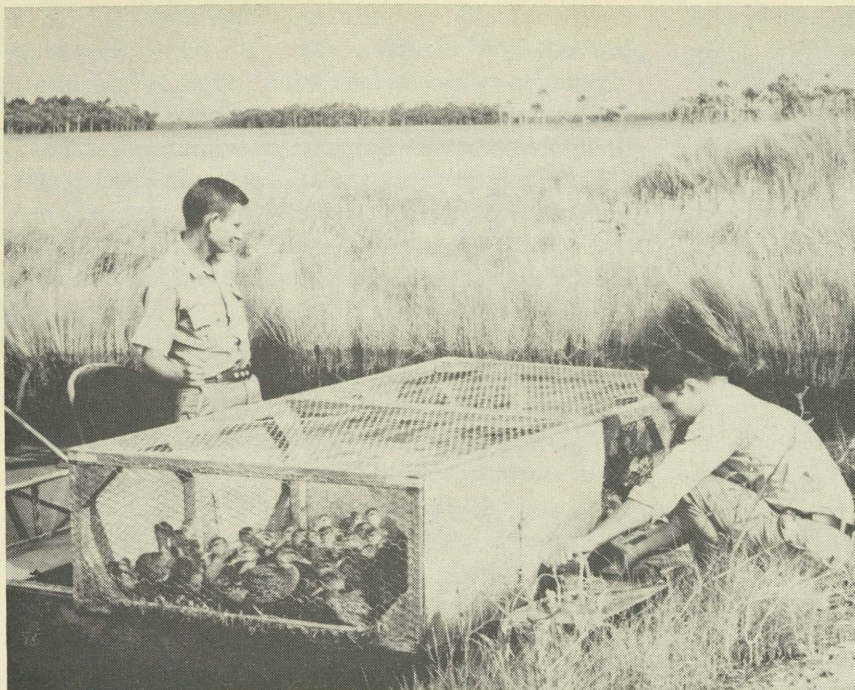
There is generally a little vegetation in the laboratory pond and the bass run around 10 pounds apiece. The way they can disappear in the little patches of vegetation is a surprise to most viewers. At times they appear to bunch up and at other times they scatter out, but the observations as to periods of activity have been disappointing. They don't show the group spurts of activity generally attributed to fish; certainly they aren't as concerted in their activities as the squirrels in nearby oaks. Of course, well-fed bass in a small pond aren't quite the same as wild fish in the river a few yards away.

On the day Joe demonstrated a surface lure for me, and hooked one of the larger fish, there was an interesting reaction on the part of the rest. He'd had a couple of strikes before hooking one and the first fish threw the hook so two of the eleven whoppers had been stuck before the session ended. Then he tossed a castnet over the fish that had pulled a hook loose.

Two hours later there was no sign of activity in the pond. During the netting episode all of the fish had disappeared. Generally they'd come out immediately with the appearance of menhaden being thrown into their pond, but after two hours to contemplate the disturbing events they didn't make an appearance when Joe tossed in a handful. Only after he walked away from the edge did they start sliding out of their hiding places to inspect the menhaden suspiciously. Finally they began feeding.

That kind of performance doesn't bear out the stories of fish that could be caught on lures several times the same day but, after all, these are old and wise bass matrons. They'd have to be to get to 10 pounds in a busy river visited by innumerable scheming fishermen.

But that Joe Kenner is pretty sneaky where bass are concerned. ●



Ed Collingsworth, left, and Bob Pacific, manager and assistant of Chassahowitzka National Wildlife Refuge, the Bureau of Sport Fisheries and Wildlife, unloading gadwall at the Florida release site.

young gadwall waterfowl have been brought from Canada as possible permanent dwellers and breeders in Florida

IT WAS LATE June on the Delta Marsh, and the warm sun shown upon three Cree Indians beating through the grassy meadow, searching for duck nests and the treasured eggs they contained. Their ancestors must have similarly worked the shores of this same Southern Manitoba marsh for thousands of years. But this is June 1968, the search is primarily for gadwall eggs rather than any eggs available, and the immediate destination of the eggs is an incubator at the Delta Waterfowl Research Station rather than a buffalo-skinned lodge in a nearby Indian village.

For their labors, the Indians are paid in rather commonplace money. The paper and coins, in turn, provide the same kind of groceries eaten by your family. It is all disappointingly civilized when we pause to realize that less than a century ago, the duck eggs were sought as a beginning of food abundance after the long winter fast.

All this would appear to have little relevance to FLORIDA WILDLIFE and followers of Florida waterfowl, except that the Cree Indians were the first in a long train of events that would culminate with nearly two-hundred gadwall ducklings arriving in Florida, in late August, via Northwest-Orient Airlines, long before the rest of their kind were ready for the long migration South.

These particular gadwall, hopefully, were earmarked for bigger things in life because of an introduction experiment jointly planned for Florida by the Wildlife Ecology Laboratory at the University of Florida; the Southeastern Region, Bureau of Sport Fisheries and Wildlife, U.S. Department of Interior; and the Delta Waterfowl Research Station, Delta, Manitoba, Canada.

For reasons to be explained later, the gadwall

Gadwall Seeding

was selected as one of the North American waterfowl species most likely to fit into the Florida environment as a nesting species. Chassahowitzka National Wildlife Refuge, on Florida's Gulf Coast about forty miles north of Clearwater, was selected as an ideal site for the experimental release.

Trouble-shooting the operation at Delta was a University of Florida graduate student, Mr. Bruce Batt. Bruce is a native Manitobian who, for several reasons, found himself earning a Master of Science degree in waterfowl ecology at Gainesville. Since his research project involved mallards in Manitoba, Bruce agreed to take charge of the gadwall eggs and shepherd them through 3 to 4 weeks of incubation and four to six weeks in the Delta hatchery. Very few of us will ever know the amount of work involved in caring for several hundred ducklings, but it must be considerable.

Bruce's involvement in the project ended with his placing the ducklings in cardboard cartons, trucking them to Winnipeg, and consigning them to Northwest-Orient Airlines. The gadwall took to jet travel as though it were the pond back home. They arrived at Tampa International Airport with a cheeping that might have been heard all the way back to Manitoba. Ed Collingsworth, Refuge Manager at Chassahowitzka, cleared the ducklings through Customs with the usual amount of paper work and trucked them north to Chassahowitzka Refuge.

As luck would have it, we were in the midst of a heat wave in mid-August and the ducklings were over-heated, thirsty and hungry by the time they reached the Refuge. Since they had a long ride ahead of them by boat and airboat, we first watered and fed them. Then, as is often the case with man-planned projects, disaster struck. Ducklings began to die almost immediately and about fifty of the original hundred and eighty were dead at the end of the first week. We think mortality was caused by a combination of mishandling, both during shipment and immediately after their arrival, and stress from shipment.

Experts at rearing gadwall tell us this species is one of the most difficult to rear in captivity because it just doesn't adjust well to handling and disturbance. In any event, by the end of September, the ducklings stopped dying and their numbers have stabilized at approximately fifty pairs. We believe we know how to reduce the mortality next year, if more ducklings are imported.

If you've read this far, you're probably beginning to wonder why we went to all the trouble. If we waited until November, there would be several thousand gadwall wintering on and near the Refuge which flew to Florida under their own power. Ironically, a few of them may have originated on the Delta Marsh! Prior experience with waterfowl

introduction, or "seeding" as it is sometimes called, has shown that young birds must be introduced to the marsh on which it is hoped they will breed, prior to learning how to fly. Apparently, a duckling in some unknown manner recognizes the marsh it grows up on as home. The females, at least, will usually return to their home marsh, or "natal marsh" as it's often called, to breed. So this is why it was important to bring ducklings to Chassahowitzka, rather than just going out in early winter and live trapping migratory gadwall.

Why interfere with nature at all? This is a good question asked by many professional wildlife biologists. If it was in the "nature of things" that gadwall should breed at Chassahowitzka National Wildlife Refuge, they would do so naturally. One of man's favorite activities appears to be moving wildlife from one place to another. While usually done with the best (or worst?) of motives, that of improving upon nature, it sometimes works out well, more often doesn't work at all, and too often ends in disaster.

Those people interested in Florida's outdoors realize that breeding waterfowl are in short supply. We have a small population of Florida ducks, or summer mallards as they're often called; nesting wood ducks in undetermined numbers, and a few oddities such as Muscovys (Royal Ducks) and fulvous tree ducks. Even a blue-winged teal with a duckling was seen this summer on Lake Kissimmee by David LaHart, another wildlife graduate student at the University of Florida.

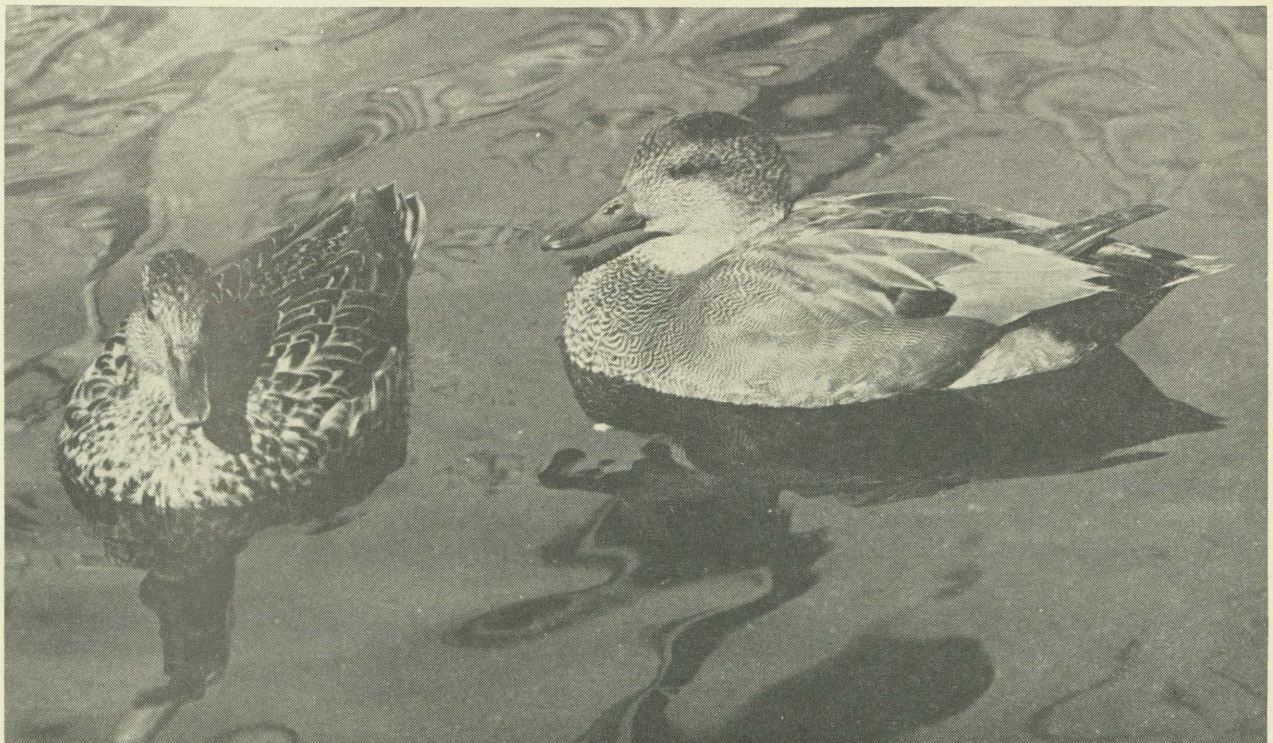
Duck hunters in Florida fire nearly all their shells
(Continued on next page)

By **GEORGE W. CORNWELL**

Associate Professor of Wildlife Ecology
University of Florida

Beautiful Canada Gadwalls—the hen, left, and drake.

Photo By Wallace Hughes



(Continued from preceding page)

at ducks hatched and reared far to the north, usually in Canada. A substantial group of biologists and interested citizens believe it would be desirable for one or more additional species of waterfowl to nest on Florida's wetlands. Thus, our experiment with the gadwall.

Why the gadwall? To begin with, the gadwall is a hearty species that appears to be increasing in numbers at a time when once more common waterfowl, such as the mallard, are decreasing. In fact, the 1968 spring breeding pair inventory showed about a 300% increase in gadwall pairs observed on aerial transects. Then, too, the gadwall is quite a pioneer. As a result of experiments like the one we're trying in Florida, gadwall breeding populations have been established in Maryland, Delaware, New Jersey, New York, Massachusetts, and North Carolina.

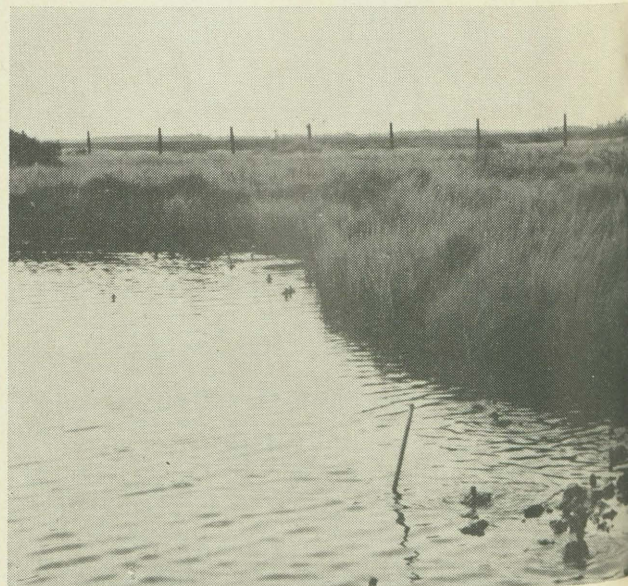
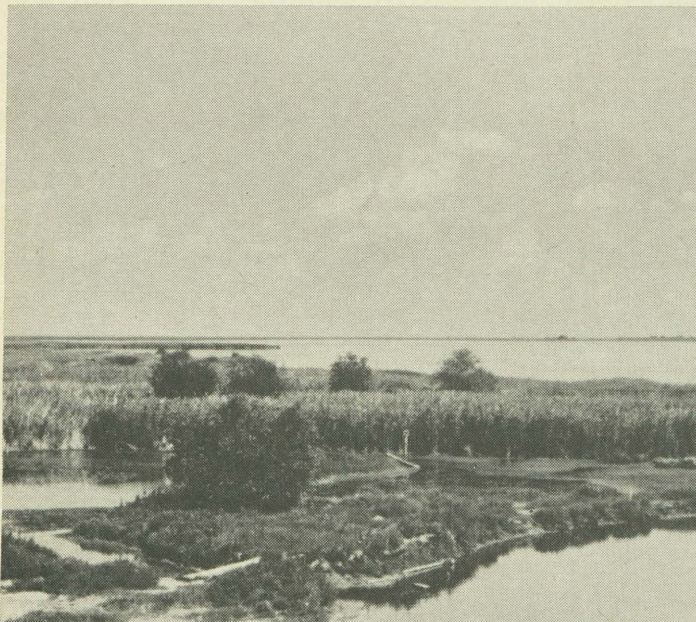
The gadwall is among the last to breed on its native marshes, nesting when summer temperatures are highest. It tends to select dry, dense nesting cover. It nests in southern Spain and in Algeria. There is good reason to think it can reproduce in a climate not unlike that of our Gulf Coast. In the West, breeding gadwall are commonly associated with alkaline marshes with vegetation quite similar to that in our coastal marshes. The gadwall tend to withstand greater nesting densities than most of the ducks. In other words, they're not bothered by "togetherness."

On one study of ducks nesting on islands, gadwall were found at a density of 200 pairs per square mile. This density factor is important because our initial experiments are in fenced enclosures a few acres in size. These are some of the reasons why we think the gadwall is a good bet and at least worth a major effort.

At the end of October, the birds were doing well. Hurricane Gladys passed overhead without causing any appreciable damage. Based on our observations, the gadwall are feeding in part on natural food available in the enclosures. They are beginning to show a healthy sexual interest in each other, what we hope to be the beginning of pair formation, nesting, and rearing of young. If the penned gadwall are successful in reproducing on the refuge, we hope the young will learn to fly out of their pens and colonize the surrounding marshlands, remaining there to breed rather than joining the migratory gadwall in their return to Canada. Of course, our experiment will fail if they fly north rather than stay on their adopted natal marsh to reproduce.

Predation is another major concern. Most FLORIDA WILDLIFE readers are well aware of the high density of raccoons in our coastal marshes. These raccoons probably would delight in a supply of gadwall eggs on their dinner table. We learned in September that a cottonmouth moccasin can and will eat nearly grown gadwall. Vultures and crows may be a problem as well.

It's expecting a great deal for prairie ducks from Manitoba to become permanent residents of Florida. But man continues to experiment and seek environmental improvement, at least as he views improvement. While our coastal wetlands are a highly valuable resource unto themselves. I can't help but believe they would be even more treasured as producers of waterfowl of value to hunters and naturalists. After all, enough people have moved to Florida from the north to make me think ducks might be willing to give it a try. ●



A salt water, tidal pond on the Chassahowitzka Refuge, now holding about 25 pairs of gadwall.

The Delta Marsh, Manitoba homeland of the Florida gadwall.

Hunting Guns

HUNTING



By EDMUND McLAURIN

noticeable during hunting seasons—especially in Florida—is the deer hunter's preference of light, fast-firing military style rifles

ONE OF MY MOST frequent requests is for specific recommendation of make and model, for a contemplated shotgun purchase. Usually, the inquirer expects me to name a particular model and extol its virtues above all others.

I never make any kind of shotgun purchase recommendation without knowing individual preference of shotgun action, how the shotgun will be used afield or at gun club, the age and physique of the gun's user, and his shooting experience and planned financial investment.

Usually the higher priced makes and models of shotguns are better finished, smoother of action, have ventilated rib sighting plane and are more desired than a low-priced make and model.

But price alone is not assurance of good shotgun performance. What counts is how well the gun fits its owner, how it balances, how it quickly shoulders and naturally points, the uniform quality of its delivered shot pattern, and—very important—where it consistently places its shot charge in relation to point of aim.

It is quite possible for a gun owner to smooth up or otherwise modify an inexpensive, but mechanically sound, shotgun so that it gives excellent performance. This usually entails some stock alteration (to acquire perfect face and shoulder fit and obtain correct length of pull).

But the barrel boring and shot patterning qualities of the inexpensive shotgun may be every bit the equal of the finest, most expensive American-made gun or import, performance-wise.

An example was the recent use of a single-shot smoothbore costing around \$50, in an informal local trap shoot in which shotguns up to \$375 value were represented.

The owner had made careful study of the fit of his \$50 gun, and had made easy, inexpensive changes in comb height, drop at heel and length of pull. He had patterned the altered gun at various stages of gunstock physical change until he knew what results the different changes were producing and, finally, just where his altered shotgun eventually centered its shot pattern in relation to point of aim, at average shooting distances. He further smoothed up rough spots in the action.

On the firing line, he shot average scores comparable to those made by owners of the finest of over-and-unders. The fact that he was using an inexpen-

sive single-shot gun, and had to manually cock a hammer for each shot bothered him not at all. The important thing was that he could hit fired-at targets. He was just as happy—even happier—than some less successful owners of shotguns selling for six times or more the price of his simple shotgun. For the recreational, non-ambitious competitive shooting he was doing, his shotgun was perfectly satisfactory.

I do have shotgun preferences. . . . In the old days I swore by the old Winchester Model 97 and the Winchester Model 12 and the Remington Model 31 pump-actions.

I go strongly for the modern Ithaca Model 37, the Remington Model 1100 and the Remington Model 870 "Wingmaster."

I admire the fine Browning and the Daly over-and-unders and their fine workmanship, but unless they balance nicely in hands and fit me just right in stock dimensions, I wouldn't buy one and use it solely, even if they were selling for only \$50! For sure hitting—and with any missing correctly charged against me, as my own fault—I put faith in shotgun models like the Remington Models 31, 870, 58 and 1100, Winchester Models 97 and 12 and the Ithaca Model 37, which I have to alter only slightly—if at all—to achieve perfect fit.

To me, gun fit and performance are what count most in a shotgun. Any needed mechanical smoothing I can make myself, or get a competent gunsmith to do. Price alone is not the criteria; neither should it be for you.

Fortunately, you have the spring and summer months to shop around for exactly what will suit you best for the next fall's hunting. Just don't make the mistake of waiting too long before you start looking, as happens to countless hunters every year. Acquire that new shotgun early and get used to it.

ESPECIALLY noticeable during the last deer hunting season were the many .30M1 Carbine rifles carried by hunters. Obviously, hunters—Florida hunters, at least—like the light, fast-firing weapon of the military.

During the years of World War II, several million U.S. .30M1 Carbine rifles were manufactured for our armed services. Winchester turned them out by the thousands; so did other munition makers, as

(Continued on next page)

(Continued from preceding page)

well as typewriter manufacturing firms that tooled up to handle assigned war emergency contracts. Many of these military rifles eventually found their way into the hands of sportsmen as war surplus arms.

Also, after the war, Universal Firearms Company, Hialeah, Florida; Plainfield (New Jersey) Machine Company; Alpine Sales Company, Azusa, California, and Erma Firearms Mfg. Company, Steelville, Missouri, started making .30M1 Carbines to meet popular civilian demand.

Today, there are thousands of .30M1 Carbines in possession of sportsmen, who own them because they carried the model in World War II and liked the .30M1 Carbine's weight, balance, firepower and mild recoil.

For those interested in the .30M1 Carbine's physical characteristics, average rifle weight is around 5½ pounds, with an extra pound to be added to that figure if the 15-shot clip is fully loaded. Overall length is a bit under 36 inches. Barrel length is 18 inches. Action is gas-operated; as bullet passes a small hole in the barrel, gas is drawn into a gas cylinder below the barrel, activating a piston which operates the action. Chamber pressure rarely exceeds 40,000 pounds. On the military models, the front sight is blade type, protected by wings; rear sight is peep type, adjustable for elevation and windage.

Although never accepted as a deer rifle by gun editors, because of its low striking energy at average hunting ranges, the .30M1 Carbine cartridge will kill deer—as proven numerous times

But ballistically, the cartridge does not have anywhere near the energy of the ubiquitous .30-30 Winchester cartridge, made popular by the famous Winchester Model 94 lever-action rifle. The low velocity, light bullet can be considered a reliable deer killer only when fired by a good shot who can shoot to hit a vital area on his all-important first shot, then pour in two or three fast follow-up shots for good measure.

However, many average shots have used an M1 Carbine successfully—helped by soft-nose hunting ammunition and favorable field conditions.

To meet the initial demand for a soft-nosed hunting load, Norma brought out a soft point, round-nose cartridge, loaded with a 110 grain soft lead bullet, developing around 1,970 feet per second muzzle velocity. In due course, Remington-Peters and Winchester-Western did likewise.

For a long time there were no really satisfactory scope sight mounts made for the .30M1 Carbine's autoloading action and style of empty cartridge ejection. The few that were considered acceptable were invariably of side-mounting type.

Now a number of very practical scope mounts,



A shotgun has qualities more important than a price tag, including how well it fits a shooter's physique; balances in the hands; how it points naturally, plus how it swings and centers shot charge in reflection to the point or aim.

both side and central overbore types, can be had for the .30M1 Carbine.

The S-K Insta-Mount, made by S&K Mfg. Company, Pittsfield, Pennsylvania 16340, and distributed by Doyce Gregson, Sanford, North Carolina 27330, is a high style mount that can be used central overbore, with one-inch rings to hold any popular make of scope sight of that tube diameter.

Side-mounting scope bases and holding rings are available from Williams Gun Sight Company, Davison, Michigan 48423; from Redfield Gun Sight Company, Denver, Colorado 8022; from Gander Mountain, Inc., Wilmot, Wisconsin 53192; Numerich Arms Company, West Hurley, New York 12491, and W. R. Weaver Company, El Paso, Texas 79915.

Maynard P. Buehler, Orinda, California 94563, is another source for a scope mount to fit a .30M1 Carbine.

For those merely seeking improved metallic sights, the Williams receiver-mounting FP-30M1 or WGRS-M1-CAR peep sights and Lyman 57C receiver-mounting peep sight, matched to front sight of proper height, can be recommended.

Whatever your decision—scope sight or substituted metallic sights—a changeover from military rear sight will likely give faster and more precise aim.

As with the shooting of any center fire rifle, heavy use of the .30M1 Carbine for target practice can be expensive, even if one uses war surplus ammunition.

Owners of the .30M1 Carbine sooner or later wish they had much the same rifle in .22 rimfire caliber chambering for the bulk of their target practice. A box of fifty .22 rimfire long rifle cartridges costs only a fraction of the purchase price of the same number of .30M1 Carbine cartridges.

The Hy Hunter Company and the Marlin Firearms Company were among the first to comply with popular demand, by producing much the physical equivalent of a .30M1 Carbine in .22 long rifle caliber.

The Hy Hunter Company made its replica of the .30M1 Carbine on the proven Armalite AR-7 semi-automatic action. Marlin still produces two models—the Marlin Model 99-M1 Carbine, a concealed tubular magazine loading repeater, and the Marlin Model 99-M2, a visible clip-loading style.

A West German firm, Erma Werke (represented in this country by LA Distributors, of New York) has produced in .22 caliber version what is probably the closest look-alike to the military .30M1 Carbine. Known as the M22, the Werke creation is almost an identical twin, even to the sights.

IF YOU HAVE factory furnished instruction sheets, or exploded illustrations of assembled parts and their related order, applying to gun models now owned, hang on to them. They may be especially needed should you ever require a specific replacement part.

Many gun models are fast becoming obsolete as they are replaced by new versions and chamberings. As models are discontinued, it is practice of manufacturers to drop old model component part listings from catalogs featuring latest models.

Even Stoeger Arms Corporation, a major national supply source for component gun parts, no longer catalogs replacement parts for many now obsolete gun models. It does, however, issue a special catalog that illustrates parts for most current production models, as well as a number of discontinued but still popular gun models.

Likewise, the firearms manufacturers, like Remington, Winchester, Browning, Ithaca, High Standard, Colt, Smith & Wesson, Ruger and Savage issue special parts lists for the gunsmith trade. These publications are not expensive. The NRA also publishes an exploded drawing type of firearms assembly book; it costs \$3.50.

Replacement parts are available for just about any gun ever made. There are sources of supply for original, factory-made parts, as well as gunsmiths specializing in supplying repair part needs. Consult the pages of *THE AMERICAN RIFLEMAN* and *THE SHOTGUN NEWS*.

However, in obtaining a replacement by mail order, it is necessary for the purchaser to give accurate identification of the gun part needed, preferably along with a brief description of exactly where it is located in the inoperable gun and what it does. Also, it helps a supplier to know the part number that the manufacturer originally assigned to the now needed item. Old instruction sheets and exploded view illustrations of gun models and their parts are invaluable in this respect. Hang on to them! ●

Hunters Seeing Red

By JOHN MARSMAN
Savage Arms Company

MORE COLOR gradually is being added to winter foliage throughout the country. It's a highly-reflective bright red and orange, and it is not the result of Nature's magic.

Sportsmen are wearing the colors as a safety measure. Those who have seen the results in lives saved during hunting seasons in states such as Massachusetts are now wearing fluorescent red or blaze orange vests and hats voluntarily during upland gunning seasons. During the Bay State deer season, the wearing of these colors is mandatory.

In other areas of the nation, where efforts are being made to adopt similar laws, sportsmen are resisting as they did in Massachusetts. This fall the attention of those concerned with hunter safety was focused upon Maine, where the second phase of an experiment to test the safety effects of fluorescent orange will be in progress.

When Maine sportsmen protested too vehemently against a state-wide color law last year, maintaining, among other things, that it would frighten deer, legislators agreed on a compromise. A two-year test was decided upon in a three-county area in a heavily populated section of the state.

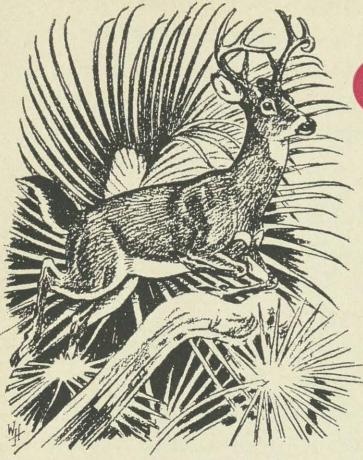
Results of the first year surprised even the optimists. Previous to the hunting season of 1967, and running back for at least eight years, an average of eight visibility-connected accidents had occurred annually within the test area.

Last year, with hunters required to wear hats or vests of fluorescent orange color, the accident rate was cut in half and none of the victims was wearing the required color. Some sportsmen are stubborn right up to the very end.

As for the deer being spooked and the kill dropping drastically, the opponents were wrong on that score also. Of the three test counties, York and Androscoggin emerged with record deer harvests and Cumberland registered its highest kill since 1951.

Proponents of the color law in Maine hesitate to accept any credit for the increase in hunter success, but they do think the color law had something to do with the low accident rate. If the second phase of Maine's experiment this fall produced similar results, a state-wide law requiring the wearing of the new color during deer season is anticipated.

Sportsmen in other states should be among the more concerned observers of the experiment, particularly if the hunter accident rate is high in their respective areas. This is one time they should want to see red—the life-saving, fluorescent kind. ●



CONSERVATION SCENE

Wildlife Officer Reserves

A PILOT Wildlife Reserve has been organized by the Florida Game and Fresh Water Fish Commission in Orange, Brevard and Seminole counties, according to Dr. O. E. Frye, Jr., director, who addressed the first Reserve meeting and training session held December 7, 1968 at the Junior Chamber of Commerce building in Orlando.

Fifteen reservists were accepted for membership from about 50 applicants. All are 25 years of age or over and residents of one of the three central Florida counties. They are receiving training in principles of wildlife conservation, game and fish management, wildlife law enforcement and public relations.

Qualified reservists in this pilot project assist Commission information-education officers, wildlife officers and management personnel with exhibits and special promotions, with school and conservation club programs, and as qualified firearms safety instructors. In addition, reservists, who wear a special uniform and shoulder insignia, help with actual game and fish management work.

Reservists have no arrest powers and are not authorized to carry sidearms. While on duty they are responsible to the Commission and must file activity reports on forms provided for this purpose. They are unsalaried, furnish their own uniforms, pay for their own insurance, and travel

at their own expense to attend a 3-hour training session each month.

"We are quite impressed with the caliber of men the Reserve has attracted," says Commission Personnel Officer Capt. David Swindell, who is in charge of training. "The reservists are well-rounded individuals who appear to be conscientious in seeking ways to serve the wildlife conservation cause."

Other Commission personnel taking part in the December organizational session were Central Region Commissioner Harold W. Ashley of Melrose, who also addressed the reservists, Maj. J. W. Bickerstaff, regional manager, Capt. of Law Enforcement Roscoe Hamilton, and Lt. Jim Reed, regional information-education officer, all of Ocala, and Lt. E. G. Pierce, DeLand, Area 24 law enforcement supervisor.

Chemicals Wipe Out Birdlife

UNIVERSITY of Wisconsin wildlife scientists have concluded that the chemical DDT, used in plant pest control operations, is wiping out large regional populations of predaceous birds located at the tops of food chains in contaminated ecosystems, the Wildlife Management Institute reports. In their work with herring gull eggs from widely separated colonies in the United States, the scientists have established that shell thickness is correlated precisely with the concentration of DDE, the breakdown product of DDT, within the eggs.

As a breeding species, the peregrine falcon, within the last two decades, has been wiped out in the eastern one half of the United States and has declined drastically in western U.S., Finland, Sweden, Germany, Britain, France and Switzerland. The spectacular de-

cline of peregrines in the U.S. and western Europe will be described in a new book, "Peregrine Falcon Populations: Their Biology and Decline," soon to be released by the University of Wisconsin Press. Along with the unprecedented population crashes of the peregrine, regional numbers of some other raptors have declined substantially on both continents. Bald eagles and ospreys are involved in the U.S. and sparrow hawks and kestrels abroad.

These population nose dives are marked by a characteristic reproductive failure in which adult birds accidentally break their thin-shelled eggs and eat them. Wildlife researchers have shown this breakage of egg shells corresponds with a sharp change in shell thickness beginning in 1947, one year after DDT was used generally.

According to the scientists, DDT or DDE stimulates the liver to produce enzymes that break down sex hormones in the blood. Lowered levels of the hormones keep birds from mobilizing calcium needed to develop normal egg shells.

Both DDT and DDE can travel extremely long distances in water or the world's atmosphere. The long-lived chemicals attach to dust particles, are picked up and carried by winds, and return to earth by rain drops or direct fall out. DDE now is considered the most abundant synthetic compound present as a pollutant in the world's environment.

Choctawhatchee Bay Park

THE STATE Cabinet has accepted "Eden," a white-columned 19th century mansion at Point Washington in Walton County, as a donation from Miss Lois G. Maxon to the Florida Park Board.

State Parks Director Bill Miller

said the newly-acquired property will not be opened to the public until completion of botanical gardens under development on the grounds surrounding the mansion.

The mansion is set in a canopy of huge moss-draped oaks on a 10-acre estate east of Destin, off U. S. 98 on the Choctawhatchee Bay. The double-verandahed, many-columned Greek Revival facade of the house is reflected in a large pool graced by valuable statuary.

Miss Maxon completely restored the house in the style reminiscent of the 19th century Gulf South when she came to Point Washington from New York several years ago for reasons of health. She had found the mansion in an extremely dilapidated condition and set about returning it to its original gracious grandeur.

Miss Maxon had begun landscaping gardens on the surrounding grounds, and this development will be continued for public exhibition by the Park Board with assigned personnel who will live in a smaller three-bedroom house on the premises.

Miss Maxon has offered to make additions to the house and grounds at her expense if approved by the Park Board.

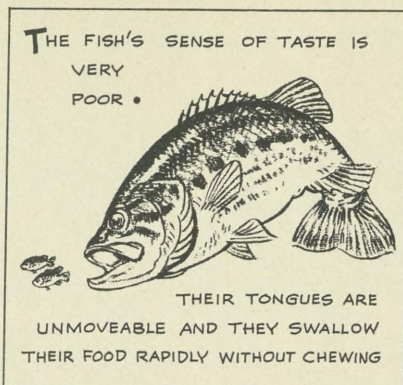
The deed will contain the condition that the property will revert to Miss Maxon or her estate if not used as a public park and historic memorial.

Hunters Learn Field Sports

A GROUP of hunters from a southern state announced not too long ago that they had discovered much more to the sport of hunting than the kill they had deemed so important. However, they learned their lesson in a round-about way and only after many years afield, according to John Marsman, Savage Arms Co.

Employing the organized drive method of hunting deer, the group enjoyed considerable success and congeniality until age began thinning out the ranks. Many dropped out of the annual hunts because they found themselves lacking in

Nature Notes



the physical stamina demanded by this hunting technique.

The drive method, to be successful, must be well organized and carried out in detail. Every hunter must attend to his assignment. It's a methodical way of hunting deer, perhaps too serious for a sport such as hunting. In the eyes of some observers, it is unfair to the quarry.

As the dropouts in this particular group increased, a change in hunting technique was instituted to preserve the fellowship built up over the years. The harvest, it was decided, could be sacrificed. There would be no more planned drives. Instead, some members of the group would take up stands voluntarily, while others still-hunted at their leisure, either on their own or among their posted companions.

The results were surprising. Instead of suffering a decrease in harvest, the group bagged more game. The hunts became more enjoyable and familiar faces began to reappear in camp. Hunting had taken on a new meaning, its values once again extended beyond the game bag.

Sportsmen don't have to wait until age mellows them to gain this point of appreciation. There's a limited amount of satisfaction in killing a deer that's been driven to you, all caution forgotten in its flight. Try out-guessing one in its own habitat. No help from companions, just you and the deer.

You'll discover genuine satisfaction in success under these conditions, plus an entirely new

meaning to an old sport you thought you knew so well. After all, isn't friendship and congeniality what hunting is all about?

Commercial Forest Lands

MORE THAN NINE out of every ten acres of commercial forestland owned, leased, or harvested by major forest products industries are open to public hunting without charge, according to the Wildlife Management Institute.

A survey covering 65,688,333 acres of commercial forests involving 234 major firms shows that the largest acreage, 49.2 million, is open without charge to hunters and there is no requirement that sportsmen secure a company permit before going on the land. Nearly 7 million acres more also are open for free hunting, but sportsmen are required to apply for a company permit.

Commercial forest lands open to hunting for a fee involve 2.1 million acres. Another 3 million acres of company lands are leased to hunting clubs, and 163,000 acres may be hunted by employees of the companies owning the land.

In all, the survey showed 93.3 percent of the industry-owned and leased land available for one or more public recreational activities, including hunting, fishing, boating, picnicking, and trapping. More than 95 percent of the companies contacted said they open their lands for the public to use and enjoy.

In providing this public recreational opportunity, the companies reported they incurred expenses of \$7,038,850. Vandalism cost the companies \$436,070. Unthinking and uncaring individuals caused these losses by destroying signs, thievery, damaging company equipment, property, and roads, dumping garbage, and starting forest fires.

According to survey reports received by the American Forest Institute, 37 commercial forest companies say they have one or more professional wildlife managers on their staffs. ●

SEVENTEEN OF 19 telemetered Florida wild turkeys released in Fisheating Creek Wildlife Management Area in Glades County just before the opening of the 1968-69 hunting season were bagged and their radios were returned to the Game and Fish Commission, according to Wildlife Research Project Leader Lovett E. Williams, Jr., Gainesville, and Project Assistant David H. Austin, Sebring.

The transmitter-toting turkeys were the stars of the Commission's most recent wildlife telemetry show, an unprecedented study of crippling losses of gun-shot wild turkeys. (See Game Notes, *FLORIDA WILDLIFE*, November 1968.)

Each of the 16 successful turkey hunters—one doubled, taking two of the study birds, on separate hunts—was interviewed by the biologists. Their completed questionnaires have become a part of the research record.

The researchers got a bonus when 12 turkey hens, still wearing their "dead" radios from last spring's nesting and poult mortality investigation in the same area, were also turned in by hunters. (See the June 1968 issue of *FW*.) These came from among 23 birds used in that segment of the study—another 12 were released and monitored through the nesting season in the closed, refuge study area.

The total number of surviving turkeys from the spring study cannot be accurately determined since their sets long since stopped transmitting. Maximum useful battery life is about five months and the 35 hens were instrumented last March.

All 28 turkey hunters returning telemetry equipment to the project biologists and cooperating with the interviews received free 3-year subscriptions to *FLORIDA WILDLIFE*.

According to Austin, only two of the returned units were damaged by shot, and one of these was possibly reusable. Each set costs around \$55, complete with mercury batteries.

Questioned about the type of hunter making the kills, Austin said, "Of the 28 I'd say only four or five are really good turkey hunters. The rest were just out hunting in general, not actually hunting turkeys. The majority had never killed a turkey before."

Although the rate of kill of telemetered birds appears extremely high—especially considering the nearly 90% return of October-released turkeys—neither biologist was surprised. They said an extremely low total turkey population in the Fish-eating Creek area this year—brought about by severe spring flooding—was part of the answer.

Also mentioned was the easily overlooked fact that prime turkey habitat is limited to the creek swamp, which therefore reduces the population's



Photo By Lovett Williams

Space-age strides in wildlife research have enabled biologists to keep in touch with wary wild turkeys electronically. This harnessed hen is wearing a complete radio transmitter with a mercury battery power source. Note antenna attached to back.

normal range to roughly 15 sections—10 to 15 per cent of the land area open to hunting, approximately 65,000 acres.

"Another factor in the high kill of the telemetered birds was probably their reaction at having been released into completely new surroundings just a few days before the season opened," said Williams. "Their social bonds were upset from the capture and transplant process, which undoubtedly caused the turkeys to be unsettled, less familiar with available cover, and, therefore, more vulnerable to hunters."

There is no evidence, say the biologists, that the wearing of the tiny radios and soft harnesses in any way contributed to the high hunter success in this study. They point to a comparable harvest rate of Fisheating Creek turkeys wearing only leg bands.

ANOTHER "first" for Florida and the Commission's Wildlife Research Project, a Federal Aid to Wildlife Restoration study (P-R), is an experimental model of a solar cell-powered radio placed into service on a wild turkey in late December. Like space vehicles and satellites, the wildlife radio's solar cell converts the sun's energy into electricity and stores it to power the transmitter!

"This opens entirely new vistas for us," says Project Leader Williams. "Theoretically, a radio can now be useful for the natural life of the turkey, not just for the life of the mercury battery."

For that BIG ONE that didn't get away



ELIGIBILITY REQUIREMENTS SPECIES

LARGEMOUTH BASS

.....8 pounds or larger

CHAIN PICKEREL

.....4 pounds or larger

BLUEGILL (BREAM)

.....1 1/2 pounds or larger

SHELLCRACKER

.....2 pounds or larger

BLACK CRAPPIE

.....2 pounds or larger

RED BREAST

.....1 pound or larger

All fish must be taken from the fresh waters of the state of Florida, as defined by the Game and Fresh Water Fish Commission. Fish must be caught on conventional fishing tackle, with artificial or live bait, in the presence of at least one witness.

The catch must be weighed and recorded at a fishing camp or tackle store within the state by the owner, manager, or an authorized agent of the respective establishment.

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is available without charge, to any and all subscribers to Florida Wildlife Magazine, and their immediate families, who catch any of the fresh-water game fish of the prescribed species and size requirements. Citation, showing recorded date of the catch, will be mailed to the applicant upon receipt of the following application form that has been properly filled out and signed.

Only fishing citation applications received within
90 days from date of catch will be honored.

APPLICATION FOR FLORIDA WILDLIFE FISHING CITATION

The Editor, FLORIDA WILDLIFE _____ Date _____
Game & Fresh Water Fish Commission, Tallahassee, Fla.

Please send me the Florida Wildlife Fishing Citation with the inscribed data listed below:

Name (please print) _____

Address _____

City _____ State _____ Zip No. _____

Species _____ Weight _____ Length _____

Type of Tackle _____

Bait or Lure Used _____

Where Caught _____ in _____ County

Date Caught _____ Catch Witnessed By _____

Registered, Weighed By _____ At _____

Signature of Applicant _____

CUT OUT AND SAVE THIS APPLICATION BLANK



White-tailed Buck (in spring velvet)

Photo By Leonard Lee Rue III

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